BRITISH MEDICAL JOURNAL

LONDON: SATURDAY, JUNE 9th, 1934

PREVENTION OF PUERPERAL SEPSIS IN GENERAL PRACTICE*

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In spite of the large amount of research work which has been undertaken and the numerous papers which have been written in the last ten years on the causation of puerperal sepsis, the position shows no improvement, but rather grows worse. Twenty years ago the death rate from puerperal sepsis was 1.42 per 1,000 live births ; last year it was 1.61.[1]

If we turn back to the days before the introduction of antiseptics into midwifery practice we find little upon which to congratulate ourselves. The Registrar-General's figures before the year 1892 are not quite comparable with those of to-day, since some of the maternal deaths from sepsis were entered under erysipelas and other septic diseases instead of under puerperal fever. Nevertheless, it is interesting to note that in 1862 the rate calculated from these returns was 1.3 ; in 1872, 1.8 ; and in 1882, 2.9. When the assignment of all deaths from puerperal sepsis to that heading was made there was a slight fall to 2.6. These figures at least suggest that the deaths from sepsis did not reach such an appalling height as we frequently suppose.

More reliable information has been presented to us by James Young,[2] who found from the records of the Edinburgh General Hospital that during the years 1826–57 the death rate from sepsis was 2 per 1,000. Further, most of the deaths occurred in epidemics, so that in some years there were large numbers and in others none at all. Collins reported that during his mastership of the Dublin Lying-in Hospital (1826–33) there were eighty-eight deaths from sepsis in the first three years and none at all in the last four, during which time 8,000 women had been delivered. The serious epidemics which broke out from time to time in all maternity hospitals, and which contributed so largely to the total number of deaths from sepsis, are now almost things of the past. The Departmental Committee on Maternal Mortality and Morbidity, which investigated the circumstances of 5,805 maternal deaths spread over a period of about three years, reported that

"the majority of deaths from sepsis seem to have occurred as isolated cases in the practice of an individual or hospital, and the committee has been unable to find any convincing evidence of direct spread from patient to patient as an important factor in maintaining the high and increasing death rate from puerperal fever." [3]

If the epidemics have disappeared and the death rate remains about the same, it follows that the number of deaths from isolated cases of puerperal sepsis has risen since the introduction of antiseptics into the practice of midwifery. That is in this country, but in the Scandinavian countries, which have not altered their statistical methods to any material extent during the last fifty years, we find a definite drop synchronizing with the introduction of antiseptics.[4] Thus in Denmark the puerperal sepsis death rate remained almost steady at 2.6 per 1,000 from 1856 until 1900–4, when it dropped to 1.5, and has since shown no tendency to rise.

Intervention in Normal Labour and Puerperal Sepsis

It would seem that the good effect of antiseptic precautions which is apparent in Scandinavia has been masked in this country by some change in our midwifery practice. Those of us who can look back forty years know that during that time there has been a great increase in obstetrical interference with the course of labour, and this is confirmed by the records of many hospitals. At Guy's Hospital in the years 1863–75 there was intervention in 1.35 per cent. of all labours, whereas in 1928 the rate was 18.6—fourteen times as much.[5] Has any change in the women made this increase necessary? Rickety deformity of the pelvis is one of the commonest legitimate reasons for artificial intervention, yet it is very uncommon in London, and is probably less common now than fifty years ago. Women to-day are more anxious to have their labours terminated by forceps, but that applies far more to the upper than to the working classes. Is it not more likely that the change is in the doctors? Since the development of pelvic surgery few obstetricians limit their practice to obstetrics ; they have all become operating gynaecologists, and I suggest that the surgical bias which this has given to their minds has swept them away from the sound foundations of midwifery laid down by Smellie and his successors. Their pupils, worried by the exigencies of private practice, have all too readily followed in their footsteps. Many general practitioners use forceps in 60 per cent. of their cases. Simpson found it necessary only once in 472.[6]

No similar increase of the intervention rate has occurred in the Scandinavian countries ; in Utrecht, Holland, the forceps rate over a number of years was 0.6 per cent. ; in Copenhagen, 0.8 per cent. ; and in Gothenburg, Sweden, 0.4 per cent. ; and the intervention for other reasons was also low. This is very significant, for Holland has the smallest death rate from sepsis in the world—namely, 0.99 per 1,000. (There is doubt as to the comparability of the figures from the other countries with our own.[7])

The close connexion between low intervention and low death rate from sepsis is pointed out by Munro Kerr.[8] He picks out two London maternity hospitals as having almost reached the irreducible minimum for maternal deaths, and in both of them the forceps rate is under 3 per cent. Further light is thrown upon this question by the investigations of the Maternal Mortality Committee, which found that the number of deaths from sepsis after abnormal labour was equal to that following

* A British Medical Association Lecture delivered before the Mid-Cheshire Division on November 17th, 1933.

normal labour, although abnormal labours amount to only about 5 per cent. of the whole. The following table, compiled from a series of cases attended by the East End Maternity Hospital, shows an incidence of non-fatal sepsis over twenty times as high after abnormal as after normal labour.

	Confinements	Pyrexia	Percentage
Normal ...	8,010	15	0.18
Abnormal	476 (5.6 per cent.)	20	4.20

Consideration of all these points leads to the inevitable conclusion that a low sepsis rate in any practice depends upon success in securing spontaneous labour and in avoiding intervention.

Abnormal Labour Followed by Sepsis

It is of great practical importance to know the kind of abnormal condition which is likely to be followed by sepsis. In seven out of the twenty cases referred to above the hand was introduced into the uterus during or after the third stage of labour. This should be considered the most dangerous operation in the whole realm of midwifery, and should always be avoided if possible. There are three types of case in which it is commonly performed:

1. Cases in which the contraction and retraction of the uterus are unsatisfactory on account of the retention of small pieces of placenta or membranes; they can be much reduced in number by waiting patiently and allowing the uterus to expel the placenta into the vagina, instead of keeping up a continual massage of the uterus, which irritates it to contract before the whole of the placenta is separated.

2. Those in which, after the delivery of the child, there is such severe haemorrhage as to necessitate immediate manual removal of the placenta; they occur after prolonged labour, probably terminated by difficult forceps and chloroform anaesthesia, and can be avoided by careful examination and treatment before and during labour.

3. Cases in which the placenta is long retained without serious bleeding, and cannot be expressed by Credé's method; the injection of four ounces of glycerin into the umbilical vein will almost always cause a violent contraction of the uterus and expulsion of the placenta.

Ten of the twenty cases followed ante-partum haemorrhage, prolonged labour, or extensive trauma. Ante-partum haemorrhage cannot always be avoided, but the well-proved connexion between toxaemia and accidental haemorrhage, and the liability of placenta praevia to give rise to warning haemorrhages during the last few weeks of pregnancy, give us a guide to the steps which we may take towards their reduction. Prolonged labour and exhaustion are frequently due to disproportion between the head and the pelvis or to a posterior position, and can often be obviated by ante-natal care and attention during the first stage of labour, while the usual cause of severe trauma of the cervix and the vaginal walls is premature application of forceps. The ante-natal diagnosis of severe degrees of contraction is so easy that there is no excuse for unforeseen Caesarean sections late in labour, with their death rate of 265 per 1,000, mostly from sepsis.[9] Forceps, used with proper antiseptic precautions merely to draw the head through the vulval orifice, do not increase the incidence of sepsis, and the only objection to their use for this purpose is that the very ease with which delivery can be accomplished is likely to lead to their misuse in cases which turn out to be difficult. We use them in only 2.6 per cent. of our cases.

Predisposing Factors

Although difficult to show by figures, it is within our knowledge that both chlorosis and pyelitis of pregnancy are factors predisposing to sepsis; toxaemia has no such connexion. A uterus left with placenta or blood clot inside it must be guarded against, and free drainage must be encouraged by seeing that the mother moves about and is allowed to sit up in bed on the second day. It is almost universally stated that insanitary surroundings predispose to sepsis, but in a long series of normal cases we found that the incidence of septic infection was the same whether the confinement took place in hospital or in the slums. All serious abnormalities are brought into hospital because it is impossible to carry out the necessary obstetric treatment and nursing care in the poor homes of the patients.

I have been led to dwell upon the so-called predisposing causes of sepsis because by eradicating them general practitioners can halve their mortality from sepsis without even considering the bacteriological aspect of the subject. Trousseau,[10] speaking of the causation of puerperal purulent infection in 1868, said: "Every disease has two elements; there is the cause, properly so called; and the state of the economy recipient of the morbid impression. These two elements are always present; the first to follow out its results; and the second to combat the cause." In the attempt to prevent the access of the first of these elements the second is often neglected, whereas both are of equal importance. Tissues, if healthy, can deal with a few pathogenic germs, or there would be no women alive to-day. I am convinced that the aim of the bacteriologists to prevent the access of germs to the genital canal from any source whatever is difficult, if not impossible, of attainment in actual practice, and that even if it be accomplished the germs which are always present in the vagina before labour begins, and which are harmless to healthy tissues, are able to attack those which have had their resistance lowered by the predisposing causes we have described. If not, why should a difficult forceps case, carried out under the strictest antiseptic ritual, so often become septic? The means which suffice to prevent sepsis after normal labour will not prevent it following abnormal labour.

Nothing I have said must be taken as implying that we may neglect antiseptic precautions, either in abnormal or normal labour; on the contrary, the fact that one-half the deaths from sepsis follow normal labour[11] shows that they are inadequate. I do not intend to enter into speculations from a bacteriological point of view as to what constitute adequate antiseptic precautions, for I am not competent to do so, but I will give an outline of those we use and the result we obtain, and draw what conclusions we may from them.

The routine is as follows. The patients in hospital are given a bath before labour. All are given an enema; the vulva is well washed with soap and water, the hair is clipped short with scissors, the vulva is re-washed, swabbed with clean water, and finally with perchloride of mercury 1 in 2,000. Attendants scrub their hands and forearms with soap and water, rinse in clean water, and scrub with perchloride of mercury 1 in 1,000. These processes are repeated frequently during labour, so that the hands of the attendants and the vulva of the patient are always damp with perchloride. Since the hospital is a training school, of necessity many vaginal examinations are made by the pupil midwives, but always under the direction of the sister in charge of the case. No gloves or masks are used. Silence or quiet speaking is enjoined in the labour ward, but I have no means of finding out whether this rule is observed in the absence of the doctor or matron. A douche is given after labour to hospital patients, again for teaching purposes, but not to those confined in their own homes. There is nothing new or startling in these precautions, but as they are made under supervision we know that they are carried out. It will be appreciated that for such a routine to be properly performed in private practice the help of a midwife or

trained nurse is necessary, and it is therefore important that the practice of attending midwifery cases without such help should be discontinued.

Now for the results. During the last ten years 20,705 cases were attended—12,505 in the hospital and 8,200 in their own homes. The number of deaths from sepsis was five, giving a rate of 0.24 per 1,000, and they all followed abnormal labour. As the number of cases and the time over which they were spread are more than sufficient to eliminate chance errors, we may fairly draw the following conclusions: (1) that death from endogenous infection after normal labour is an uncommon occurrence; (2) that the antiseptic precautions used were effective in preventing deaths from exogenous infection following normal labour; and (3) it is doubtful whether these measures are carried out to their full extent throughout England and Wales. The results also exemplify what I have already said, that measures which are effective in preventing death from sepsis after normal labour will not prevent it after abnormal labour.

In this series of cases there was no evidence of spray infection. This might have been a matter of chance, for none of our midwives might have been carriers of *Streptococcus haemolyticus*. To meet this possibility Dr. Leonard Colebrook examined swabs taken from the throat and nose of every pupil midwife when she began her month on the district. From October, 1932, to April, 1933, forty-five district pupils and sisters were examined, and haemolytic streptococci were found in five, which I am told is about the proportion in the general population. The first of these five wore a mask during her month, but the rest carried on their duties without special precautions. To discover if there was any streptococcic infection of our mothers a swab was taken from the cervix of every woman delivered between June, 1932, and May, 1933, who developed a temperature of 100° F. or more, unless a definite extragenital cause for the rise was found. One gave a positive result, but the throats were probably not the cause, for one of the children sleeping with the patient had impetigo, which, on culture, yielded a haemolytic streptococcus. Although typing failed to identify it, the presumption is that it was the source of the mother's infection. In view of this evidence it appears likely that the person who is usually stigmatized as a carrier is a perfectly harmless individual. At the same time, I am not prepared to say that anyone with active disease of the nose or throat is not a danger to the mothers, and as a matter of precaution we preclude any such person from practising midwifery until the disease has cleared up.

A few words are necessary upon our attitude towards gloves. We have tried them and found that they have certain disadvantages: (1) they are expensive; (2) the pupil midwives who wear them are unable to find out whether the os is fully dilated or the membranes ruptured, two very important practical points; and (3) the pupil midwives are inclined to be less careful in washing their hands, and find it difficult to manage the wrists of the gloves without getting them contaminated. I am also satisfied that doctors wearing gloves find it more difficult to perform intrauterine manipulations. For these reasons we have discarded their use, and our results show that we have not needed the added margin of safety that they are said to give. In my opinion it is probable that a simple routine such as has been described here will be more faithfully carried out than a more complicated one, and so in actual practice will ensure a greater degree of safety to a greater number of mothers.

We will now collect in the form of axioms the conclusions at which we have arrived, being confident that if general practitioners would base their methods of midwifery upon them they would effect a very definite diminution in the number and the severity of their cases of puerperal sepsis.

Summary

1. A low sepsis rate in any practice depends upon success in securing spontaneous labour and in avoiding intervention.

2. Efficient care of the patient during pregnancy and labour will reduce the predisposing causes of sepsis to a minimum.

3. The practice of attending midwifery cases without the help of a trained midwife or nurse is dangerous, and should be discontinued.

4. A simple routine for antiseptic precautions is more likely to be faithfully carried out than a more complicated one, and so in actual practice will ensure a greater degree of safety to a greater number of mothers.

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SOME OBSERVATIONS ON THE ACUTE ABDOMEN*

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Acute abdominal conditions still loom largely on the horizon of medical practice. Their frequency does not appear to be abating, and the mortality rates of such examples as intestinal obstruction and perforated peptic ulcer still indicate the need for earlier treatment. In many instances a careful history and a complete clinical examination will indicate the correct diagnosis. Those conditions which may simulate an acute abdomen can usually be excluded, if the possibility of their occurrence is borne in mind and confirmatory evidence sought; such, for instance, as pneumonia with its referred pain, uraemia with its vomiting and abdominal distension, lead poisoning with its colic, or pregnancy and the various complications associated with it. Again, the history, the clinical signs, and an analysis of the character of the pain will usually serve to indicate those cases which do not necessitate an immediate operation—for example, renal or biliary colic.

The picture presented by many acute abdominal conditions necessitating urgent surgical treatment may be so typical that a diagnosis is readily made. Certain circumstances, however, may alter the local and general appearances and cause considerable difficulty. This paper is concerned with some of these conditions, and certain points in their diagnosis will be discussed.

The Influence of Old Age

The aged are subject to the same abdominal catastrophes that beset those of lesser years, and in many of them the manifestations may differ but little from those usually encountered. It is characteristic of old age, however, that the mental and physical response to stimuli tends to become sluggish, and this slow response is not

* Delivered to the Willesden Branch of the British Medical Association.

uncommonly illustrated by acute abdominal conditions of an inflammatory nature—notably acute appendicitis. Pain may not obtrude itself upon the patient until the local condition has advanced to the stage of peritonitis; the atrophied abdominal muscles may allow considerable distension to occur, but they are incapable of much rigidity, which is therefore slight or entirely absent. As one would expect, the temperature is often normal or but little raised, and constipation is usually present.

The senile patient thus frequently comes under observation late in the course of the malady, and the clinical picture is such that a diagnosis of intestinal obstruction may be made. One patient, a man of 80, suffering from appendicitis with peritonitis, presented such a marked degree of abdominal distension that a pre-operative diagnosis of volvulus of the sigmoid colon was made. It it not very uncommon for some of these patients to be submitted to operation—a blind caecostomy being intended for a supposed large bowel obstruction—but when the abdomen is opened appendicitis with peritonitis is found. At operation it is frequently discovered that a considerable degree of ptosis is present, the caecum and appendix being found in the pelvis. This may account, in part, for some of the anomalous features presented by these patients.

If the possibility of this departure from the normal is borne in mind confusion is less likely to occur. Tenderness over the lower abdomen and tenderness on rectal examination are seldom absent, and, as Lewin[1] has pointed out, the vomiting is much less than one would expect in an intestinal obstruction with a corresponding degree of distension. In any doubtful case auscultation of the abdomen and the radiological appearances would be valuable diagnostic aids. It is proposed to deal with these methods in detail later.

The sluggish response of the aged is again shown in the tendency to severe constipation, which not infrequently advances to the stage of faecal impaction with intestinal obstruction. Indeed, this is one of the commonest causes of obstructive symptoms in senile patients, and its importance lies in the ease with which the cause can be detected and removed.

Peritonitis Complicating Labour or Abortion

The peritonitis that may follow abortion or labour complicated by sepsis frequently presents anomalous features. It was not uncommon at operation for a large quantity of purulent fluid to be found in the peritoneal cavity when the clinical signs were but few. Abdominal pain may be only slight, and rigidity of the abdominal wall is often absent. No doubt the stress and strain on the abdominal muscles due to pregnancy and labour bring about an alteration of the usual reflexes, while the accompanying toxaemia or septicaemia will help to mask many of the local features.

In this type of peritonitis abdominal distension is frequently marked, and there is usually tenderness of the hypogastrium. Diarrhoea may be a prominent feature.[2] The preceding history, the temperature, and the character of the pulse will be useful guides. Pyrah and Oldfield,[3] in an admirable survey of thirty-six cases, have shown that in sepsis following labour, so frequently streptococcal in nature, any abdominal pain and tenderness, especially if associated with abdominal distension, should be regarded with grave suspicion, for they usually indicate the presence of peritonitis. Similar features were presented by several cases of peritonitis following abortion that have come under observation. Abdominal pain and tenderness, however, were more prominent than in the preceding group, but rigidity of the abdominal wall was seldom a marked feature. The pallor presented by some of these patients was in keeping with the virulent nature of the infecting organism.

Perforation of Peptic Ulcers

Acute perforation of peptic ulcers is another condition that may cause difficulty in diagnosis. The typical features—the sudden onset of severe abdominal pain with prostration, and general rigidity and tenderness of the abdomen—are too well known to need amplification. But when the perforation is minute the picture may not be so clear, unless the case is seen early. This type is not uncommon, for, in the last eighty perforations observed, it has been present in six. It usually occurs when the stomach is empty and the small hole is rapidly covered by lymph.

The onset resembles the ordinary perforations, but the intensity of the pain may not be quite so severe; the initial signs and symptoms, however, rapidly abate, and become localized to the upper part or to the right side of the abdomen, simulating acute cholecystitis, acute appendicitis, or acute diseases of the chest. Shoulder pain, if present, or the absence of liver dullness, in conjunction with the local findings and the history of previous dyspeptic disturbance, would be strong presumptive evidence of the nature of the condition. In the absence of these helpful signs and symptoms, however, the diagnosis may be in doubt. The temperature in the early stages of perforated peptic ulcer is usually normal or subnormal, and this is a useful differential feature from acute affections of the chest. If the means are at hand, the demonstration of free gas in the peritoneal cavity by *x*-ray examination is conclusive evidence of perforation. It is possible, by means of a portable apparatus, to undertake this procedure with little or no discomfort to the patient.

The value of this method in a difficult case is illustrated in the following example. A male patient, aged 55, was brought to hospital five hours after the onset of acute abdominal pain, which had occurred in the City, and morphine had been given to relieve it. There was some tenderness and rigidity of the upper abdomen, but the clinical picture strongly suggested an early pneumonia; the respirations were rapid, shallow, and thoracic, and there were crepitations at the base of the right lung. An *x*-ray picture, however, revealed the typical sickle-shaped areas of free gas under the diaphragm, making the diagnosis of perforated peptic ulcer definite. Auscultation of the abdomen in this case presented absolute silence except for the transmission of heart sounds. When there is doubt this finding is strongly in favour of a perforation.

The Value of Auscultation

The stethoscope has long established itself as an indispensable aid in the diagnosis of diseases of the chest. Its use in acute abdominal conditions, however, is but little known and infrequently practised. In an obscure case its value may be very great. If we exclude those sounds associated with the pregnant uterus, and those sometimes transmitted when an organ like the stomach is distended, normally, on listening to any part of the abdomen, a medley of sounds is heard due to peristaltic activity. These sounds range from soft rustling noises to loud rumbling gurgles, and their number and variety may at first be confusing. Over the lower abdomen this confusion is less, and for practical purposes auscultation in this region suffices, concentrating on the sounds produced by the small intestine. It is the actual presence of these sounds rather than their nature that is important from the clinical point of view. After a little experience a certain amount of rhythm may be noted, the sounds rising and falling in intensity every ten or twenty seconds or so. It is advisable to listen for a few moments and to repeat the process, for the sounds may vary from time to time, often subsiding into silence to reappear in abundance.

It is clear that any mechanical obstruction causing retention of intestinal contents and increased peristalsis will lead to an augmentation in the number, the frequency, and the volume of these sounds; and, conversely, any condition diminishing peristaltic activity, such as paralytic ileus or peritonitis, will lead to a corresponding diminution. In intestinal obstruction the increase in the number and intensity of the sounds is easily elicited, and they give one the impression of metallic resonance in hollow caverns, often interspersed with loud and long gurgles as if gas were passing through narrow channels. They are very characteristic and, once heard, are readily recognized. In addition, the accumulation of fluid and gas often allows a splashing sound to be elicited when there is small-gut obstruction—by dipping the fingers quickly on the abdomen—a very useful sign when positive. These auscultatory signs are of most value in those cases of obstruction of the small intestine where little or no distension is present, not an uncommon finding in cases due to bands or adhesions.

In contrast with these findings we have the absolute silence presented by the abdomen in general peritonitis or paralytic ileus. Distension may be considerable in these conditions, and the clinical picture may resemble mechanical obstruction. Auscultation thus affords a ready means of differential diagnosis. A silent abdomen is also presented by most cases of perforation of the intestinal tract, even before peritonitis is established, but while peristaltic sounds are absent, transmitted heart sounds may sometimes be heard almost as loudly over the abdomen as over the praecordium. This sign was described long ago by Claybrook[4] as an indication of a rupture of the intestine following an abdominal injury. It may be positive, however, in any condition where there is a combination of free fluid and gas in the peritoneal cavity, and when elicited is suggestive of a perforation somewhere in the intestinal tract. These auscultatory signs have been found of considerable value in a doubtful case, and especially in atypical perforations of peptic ulcer. Abdominal auscultation may occasionally be of help in the differentiation from acute lesions of the chest, for in the latter conditions the sounds are rarely absent.

It is important to bear in mind that in acute inflammation of individual organs, such as the appendix or Fallopian tubes, so long as the inflammatory process remains confined to that particular viscus the sounds will be normal, perhaps a little diminished in their frequency and intensity. It is only when the inflammation becomes more general that the abdomen is reduced to silence. Confusion is not likely to arise from the coarse rubs that may sometimes be heard over inflamed organs like the gall-bladder; these are more readily detected by palpation.

To recapitulate, on auscultation of the abdomen it has been found that in mechanical obstruction of the intestine the number, the frequency, and the intensity of the normal peristaltic sounds are increased. General peritonitis and paralytic ileus reduce the abdomen to silence, while in perforations of the intestinal tract this peristaltic silence is frequently associated with the transmission of heart sounds, a combination of great diagnostic significance.

Radiology in Intestinal Obstruction

A method which often allows a definite diagnosis to be made in a suspected case of intestinal obstruction is that obtained by means of radiology. The mortality from obstruction is still high, and rises with each hour of delay. Earlier diagnosis and treatment are essential if mortality is to be reduced. The diagnosis may not be in doubt in many cases presenting typical features, for instance, the intussusception of children, strangulated external hernia, or the acute obstruction that supervenes upon chronic occlusion of the large gut; but obstruction of the small intestine by bands or adhesions, especially those occurring soon after an abdominal operation, may present considerable difficulty. Distension of the abdomen is frequently absent in the early stages, and may be only slight even later if the obstruction is high.

It is particularly in this group that radiological evidence may be definite while clinical signs are equivocal. Radiological signs may be positive as early as two hours after the initial onset, and are earlier in strangulated than in simple obstructions.[5] This method, therefore, is useful as a complementary diagnostic aid to auscultation, when the means are at hand. No preparation is necessary, and there is no discomfort to the patient; if a portable apparatus is available the picture may be taken while he sits in bed. A lateral picture will often show a degree of distension much greater than that visible on clinical examination.

Under normal conditions in adults gas in demonstrable form is absent from the small intestine. In the large gut its presence is a matter of everyday observation. When obstruction occurs gas and fluid accumulate in the small gut, the junction of the two being shown by straight fluid levels in vertical or lateral radiographs, which are very characteristic. When the small intestine is affected the distended coils, with their feathered appearance, are readily seen, while gas is absent from the colon. Gas in the colon, in fact, would be strong evidence against obstruction of the small intestine.

By this method, therefore, it is possible to differentiate between obstruction of the large and of the small intestine, and in the former the exact site of the block may often be demonstrated by the abrupt termination of the gas shadow. This is of very great value in planning the type of operation. It will be seen that when the large intestine is involved the high gas columns are in marked contrast to the numerous shallow columns of small-gut obstructions. Paralytic ileus may present the same radiological features as mechanical obstruction, but the silence of the abdomen serves to differentiate this condition.

It is not to be inferred that radiology is necessary in the diagnosis of all acute obstructions; it is of value in the cases that are clinically doubtful; but even in those cases where the diagnosis is clear, a plain radiograph will often serve to demonstrate the site of the block.

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W. A. Riley and C. H. Scheifley (*Journ. Amer. Med. Assoc.*, April 14th, 1934, p. 1217) maintain that trichinosis in man is far from rare in the United States, as a large number of serious cases come to the attention of the medical practitioner or pathologist, and a diagnosis of typhoid fever, rheumatism, or malaria is frequently made when the condition is really one of trichinosis. On examination of 117 cadavers at Minneapolis these writers found twenty cases of trichinosis in subjects who had never shown any symptoms of the disease. E. R. Pund and R. Mosteller (ibid., p. 1220) report a fatal case of trichinosis in a negro boy, aged 11, who developed encephalitis three weeks after vaccination. There was no diarrhoea and no eosinophilia, but examination of the blood showed sickle-cell anaemia. Sections from the cortex, basal ganglia, medulla, and cerebellum showed minute inflammatory foci, in many of which embryos of *Trichina spiralis* were found.

POISONING BY CAUSTIC SODA

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(With Special Plate)

Fortunately poisoning by the fixed caustic alkalis is comparatively rare in England, although in Europe fatal cases appear to be not uncommon. Balázs,[3] for example, records in three years 754 alkali poisonings, of which 163, or 21.6 per cent., were fatal ; and further statistics are given in the works of Popper[1] and Leschke.[2] In England ammonia is more frequently employed as a fatal poison, and, according to the Registrar-General's returns[4] for the three years 1930 to 1932, it accounted for ninety-two deaths, of which seventy-eight were suicidal and the remainder accidental.

It is therefore somewhat remarkable that in a period covering little more than one year no fewer than eight cases of poisoning by caustic soda should have occurred in Cyprus, an island with a population of only 348,000. In England poisoning by the fixed alkalis has nearly always been the result of accident or negligence, and exceptionally of suicide, but in the cases in Cyprus, of which the available data are summarized in the table, half were accidental and half suicidal, the former occurring in children and the latter in adults. A number of typical cases of poisoning by caustic soda or caustic potash and their effects are discussed in the well-known works of Taylor,[5] Glaister,[6] and Wynter Blyth,[7] so that little need be said here ; while details of certain cases occurring in Central Europe are given in the texts of Popper and Leschke, already referred to. The majority of such cases appear to fall into two distinct groups: (*a*) those ending fatally within a few days, and (*b*) those ending fatally some months or years afterwards.[8]

Source of Caustic Soda

The use of caustic soda locally has greatly increased during the last few years, and it would appear that its misuse has increased correspondingly. Caustic soda is used in small quantities by the Cypriot community for domestic washing purposes, and is cheap and freely available. It has always been the practice in washing clothes to add some form of alkali in order to soften the generally prevailing hard waters of the plains of Cyprus. Formerly the alkali used consisted exclusively of wood ashes supplied from domestic sources. It is perhaps noteworthy that plant ashes, according to Mariti,[9] were at one time produced in certain villages of Cyprus for export for industrial purposes. Within recent years, however, this has given place to washing soda ($Na_2CO_3.10H_2O$), and during the last two or three years, in its turn, to caustic soda. The reasons given for this change are the cheapness and availability of caustic soda, and, it is claimed, the better results in the wash. In all these cases in Cyprus the alkali was obtained in this way, and its ready availability under the conditions prevailing constituted a serious problem. Practically the whole amount of the caustic soda imported from Europe is absorbed in the local soap industry, but, in view of recent experience, it was considered desirable to restrict its general domestic use. Accordingly it was advised that caustic soda and caustic potash should be placed on the Poisons Schedule, and this recommendation was adopted by Government in February, 1934. A similar situation appears to have existed in Hungary,[1] where poisoning by caustic alkalis was common. There the difficulty was overcome in 1926 by subjecting the sale of caustic alkalis to restrictions.

The caustic soda as sold was in the form of broken fused lumps, and analysis showed an average content of 77 per cent. NaOH with 10 per cent. sodium carbonate. This latter impurity usually accompanies commercial grades. For washing purposes it is usual to dissolve about 50 grams in a little water, and to add this to about 120 litres of water.

General Features of Poisoning

In the table are summarized the available data of known cases of poisoning by caustic soda occurring since December, 1932, although there are possibly others unknown to the authorities. In spite of the difficulties of obtaining reliable data, especially in regard to the amount of alkali taken, it has been possible to study four of this series (Nos. 1, 4, 7, and 8), all affecting adults, in some detail. Starkenstein[10] regards 10 to 20 grams of solid caustic alkali as the fatal dose, but it is clear from our own experience (see table) that a quantity less than 10 grams can be lethal. The fatal dose is unknown, but it is noteworthy that 2.6 grams (40 grains) of caustic potash have proved fatal (Taylor[5]).

Cases of Poisoning by Caustic Soda

Case	Patient	Age	Cause	Dose (grams)	Symptoms	Result
1	Turkish woman	33	Suicide	60	Burning pains in mouth, throat, and stomach; vomiting and exhaustion	Died 29½ hours after ingestion
2	Turkish child	1½	Accident	?	Lips, tongue, and palate burnt	Died 25 hours after ingestion
3	Greek child	3	Accident	Sucked a lump of NaOH	Mouth, lips, and tongue burnt	Recovery in 3 days
4	Turkish woman	20	Suicide	8.5	Burning of mouth and palate; vomiting blood; shock	Died in 11 days
5	Turkish child	3	Accident	?	Oesophageal stricture; unable to swallow any liquid	Gastrostomy; recovering
6	Greek child	5	Accident	?	Emaciation; oesophageal stricture	Gastrostomy; died
7	Turkish girl	16	Suicide	5	Stricture of oesophagus and pylorus	Palliative jejunostomy. Died after 74 days
8	Turkish girl	15	Suicide	?	Burning of lips, tongue, pharynx; vomiting; shock	Died 26 hours after

The immediate effect of swallowing caustic alkali is to produce excoriation and destruction of the mucous membrane, which gives rise to intense pain, often extending from the mouth to the abdomen. The severity of the lesions depends upon the concentration of the alkali, the stomach contents, and the interval elapsing before treatment. Alkali corrosions are usually oedematous and unctuous as compared with those from acids, which are dry and hard. The alkali extracts water from the tissues with which it comes into contact, and attacks the protein, forming alkali-albuminate, which becomes gelatinous, swells, and in the presence of much water commences to dissolve—a process termed "colliquation." Because of this, alkali burns penetrate deeply into the tissues, although cases of perforation are few compared with those which develop stricture later on.

Treatment follows the accepted lines of avoidance of stomach lavage, and the administration of organic acids and liquids in order to reduce the concentration of the alkali. The use of the bougie at the proper time is regarded as being very important, especially in Continental practice, in order to avoid later complications of oesophageal stricture.

Details of some Medical Cases

The first case of this series, which occurred in December, 1932, was one of determined suicide.

First Example.—A Turkish woman of Niccsia, a mother of five children, swallowed apparently no less than 60 grams (925 grains) of caustic soda dissolved in about 120 c.cm. of water. Symptoms of distress came on almost immediately, with vomiting and burning pains in the mouth, throat, and stomach, and with great exhaustion and collapse. It was observed that the buccal cavity, tonsils, and pharynx were soft and oedematous, and of the deep chocolate colour suggestive of recent burning by alkali, while the lips and tongue were red and swollen. The mouth gave a strong reaction to litmus paper, and the vomited matter consisted of a brownish liquid, due to the presence of blood, and contained portions of detached mucous membrane. This liquid gave a strongly alkaline reaction to litmus, which on analysis proved to be due to the presence of 1.6 per cent. of free caustic soda. The patient was allowed lemon juice *ad lib.*, but, although she appeared to have recovered from shock, her condition had deteriorated by next morning, and death took place twenty-nine and a half hours after ingestion of the poison. Unfortunately it was not possible to carry out a post-mortem examination, but it was considered that death had resulted probably from perforation of the stomach. A more detailed account of this case has been published elsewhere.[8]

Second Example.—The second case of interest (No. 4) again concerned a Turkish woman, a domestic servant, who, at 9 p.m. on August 31st, 1933, swallowed about 8.5 grams (123.4 grains) of caustic soda dissolved in a little water, to which had been added some rosewater in order to mask the burning taste. From the woman's statement the alkali had not completely dissolved, and apparently some was swallowed solid, a fact which may account for the oesophageal perforations found after death. The amount of caustic soda taken was more than three times the known fatal dose of caustic potash (40 grains).

The same symptoms as previously observed—that is, burning pains extending from the mouth to the stomach—came on immediately, with, later, vomiting of blood and mucus. On arrival at hospital, one and a half hours later, the patient was conscious, but suffering from shock, with the extremities very cold. Burning of the surface of the buccal cavity, however, was not so severe as that observed in the first case. Vomiting of blood persisted, and the vomitus gave a marked reaction to red litmus. The patient complained of severe pain in the throat and stomach. The temperature was 97° F., and the pulse rate 90, and during the eleven days of observation the temperature varied from 97° to 101°, the pulse rate between 84 and 130, and the respiration rate between 28 and 36. The patient recovered from shock, but swelling of the tissues which had been in contact with the alkali—especially the lips and tongue—was marked. By the fifth day the tongue was healing, though red, but no liquids could be swallowed, and feeding was carried out with liquid glucose per rectum. After the first week it was clear that the patient was not progressing, although the burned parts appeared to have healed, and to be covered with shiny mucous membrane. Later, signs of bronchopneumonia were observed, and the patient died on September 11th—that is, eleven days after swallowing the poison. In view of the amount of destruction of tissue in the oesophagus and stomach the length of survival appears remarkable. The coroner's finding at inquest was that death was due to exhaustion and bronchopneumonia resulting from suicide by swallowing corrosive poison.

Some interesting conditions were seen at necropsy, which was carried out five hours after death. Externally there were no unusual appearances. The lips were covered with smooth and somewhat shining mucous membrane, and the skin and mucous membranes were generally pale. Rigor mortis was present in all parts, and post-mortem staining in the dependent parts. The anterior half of the tongue was covered with smooth, shining mucous membrane, and at the back of the tongue the papillae were well marked. The mucous membrane in the upper part of the oesophagus was again smooth and shining, while the tip of the epiglottis was absent. At a point 9 cm. below the latter the walls of the oesophagus were very soft and adherent to the vertebral bodies, and at this level an oval perforation, with smooth edges, 1.5 cm. long, was found between the oesophagus and the trachea. One centimetre below this there was a second circular perforation 1.1 cm. in diameter, also leading into the trachea (Fig. 1 on Special Plate). From the site of these perforations to the pylorus the mucous membrane of the oesophagus and stomach was very soft and pulpy, but the muscular wall was firm and intact. From the level of the lower perforation extending to the pylorus, a dark red, lightly adherent slough was found forming a complete cast of the oesophagus and stomach (Fig. 1 on Plate). The stomach was filled with a dark brown fluid, which gave an alkaline reaction. The mucous membrane of the duodenum was deeply injected, but below the pylorus there was no erosion. The trachea was filled with purulent material, and the left lung exhibited patches of aspiration bronchopneumonia. The liver showed cloudy swelling, and the kidneys were injected with pinpoint haemorrhages. Sections from the liver, kidney, and stomach near the cardiac end were prepared and examined. It was found that the stomach wall near the cardiac end exhibited remains of highly oedematous and necrotic mucous membrane, in which remnants of glands were recognizable. The muscular wall was little affected (Fig. 2 on Plate). Degeneration and desquamation of the tubular epithelium were seen in the kidney, with area of complete necrosis containing blood pigment (Fig. 3 on Plate). In the liver there were again areas of slight focal necrosis (Fig. 4 on Plate). The presence of such areas in the liver and kidney does not appear to have been observed in the recorded cases of poisoning by the fixed alkalis.

Third Example.—Case 8 was again one of suicide, in which a Turkish girl, aged 15, bought caustic soda, and made a concentrated solution with water. She swallowed a mouthful at 5.30 p.m. on April 2nd, 1934, and came to hospital an hour later vomiting and in a collapsed condition. She was treated by gastric lavage and lemon juice *ad lib.*, but swallowing was difficult and painful. During the next twenty-four hours there was a purulent exudate from the nose and mouth, increasing pulse rate, pain, and collapse, and death occurred twenty-six hours after taking the poison. A post-mortem examination, performed fifteen hours after death, showed burning of the tip and back of the tongue, the inner surface of the lips, and all over the tonsils and pharynx. The burnt areas were covered with a soft, brown slough. The oesophagus was deeply injected, but the mucous membrane was not eroded. In the stomach a burnt area, 15 cm. by 10 cm., and deep brown in colour, was found extending over the centre of the greater curvature. The mucous membrane was soft, but the wall of the stomach under the burnt area was firmer than the surrounding wall. The stomach contents consisted of a yellow fluid of slightly acid reaction. There was oedema of the lungs, but no consolidation. The liver exhibited cloudy swelling and the kidney congestion. The thymus was large and glandular, and all the lymphatic glands, especially in the neck, were large, soft, and dark red in colour.

Surgical Cases

The remainder consisted of a group of surgical cases under the care of Dr. C. H. Cuff, to whom we are indebted for certain clinical data. Stricture having developed, it was necessary to resort to gastrostomy in two instances and jejunostomy in another. It is interesting to note that stricture of the oesophagus was successfully treated by operation (gastrotomy), for the first time in 1885, by Loreta,[11] in the case of a patient of 24, who had swallowed caustic alkali. Since then surgical treatment had been resorted to with considerable benefit. In cases of non-malignant strictures of this nature, Grey Turner[12] has recently recorded striking success with the operation of oesophago-gastrostomy.

In the first of these cases (No. 6) gastrostomy, by Frank's method, was successfully performed, but the patient, aged 5, died the next day from peritonitis.

The second of this group (No. 5) was that of a Turkish girl, aged 3, who accidentally swallowed a little caustic soda solution on July 3rd, 1933, the exact amount being unknown.

The usual symptoms came on, and some burning of the face, lips, and tongue with oedema were observed on arrival at hospital shortly after. This appeared to be a mild case, and after two days the parents removed the child against medical advice. The subsequent history illustrates the necessity for continued observation and treatment in subjects which appear at first sight to be mild cases of alkali poisoning. On December 18th, 1933, the patient re-entered hospital unable to swallow any liquid, and it was impossible to pass any kind of sound through the stricture of the oesophagus which had developed. Radioscopic examination revealed oesophageal stenosis opposite the third costal cartilage, and gastrostomy was performed on December 21st. During three months the patient has made uninterrupted progress on a diet consisting of soup, eggs and milk, dried milk preparations, orange juice, etc., given at four-hourly intervals.

The last case of this group (No. 7) concerned a Turkish girl, aged 16, who attempted suicide on January 19th, 1934, by taking about 5 grams (77.2 grains) of strong caustic soda solution. On arrival at hospital within the hour the patient was suffering from shock, and complained of burning pain in the mouth and stomach. There was also purging and much vomiting of blood. The body temperature was subnormal, varying between 97° and 98° F. It was possible to pass a small sound, and lemon juice was given freely. The patient recovered from shock and appeared to be definitely improving when the relatives removed her after she had been one week in hospital. On February 12th she returned to hospital—this time unable to swallow even liquids—and was, in consequence, much emaciated. Radioscopy revealed a stricture of the oesophagus opposite the fifth costal cartilage. The patient continued to lose strength, and it was suspected that the pylorus also was stenosed. On operation this was found to be the case, and palliative jejunostomy was carried out (March 2nd). The patient was afterwards maintained on a diet of citrated milk, eggs, soup, meat extracts, olive oil, liquid glucose, etc., but the emaciation was progressive, and death took place on April 2nd.

Conclusions

Poisoning by caustic alkali in Cyprus has increased remarkably during the last year, and has justified Government action in restricting its free use for domestic purposes. In all the cases studied the poison was obtained in this way. Of these the suicides were among the adults[4] and the accidental cases among the children. The fatal dose of caustic soda is less than 10 grams, and a quantity of 5 grams, in solution, has produced the most serious complications of stricture. There was perforation of the oesophagus in one fatal case, and possibly perforation of the stomach in another, while in another three cases stricture developed. Among the pathological conditions found post mortem, areas of necrosis in the liver and kidney have been observed (Case 4). It is evident from a study of these cases that the prognosis in alkali poisoning is doubtful, and that even in what appear to be mild cases the need for long-continued observation and treatment is essential.

We are indebted to Dr. C. H. Cuff, acting director of health, for permission to publish the results of this investigation.

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IMPORTANCE OF LOCAL FACTORS IN THE ONSET OF PULMONARY TUBERCULOSIS

BY

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(From the Laboratory of Papworth Village Settlement)

(With Special Plate)

The problem of the origin of recent tuberculous infiltrations of the lung ("Fruhinfiltrate," "Rundherde") is still unsolved. One group of authorities emphasizes exogenous reinfection, whereas other investigators direct their attention to the possibility of an endogenous development of the isolated pulmonary lesion of the adult. The importance of local factors in the location of recent tuberculous foci is perhaps not sufficiently recognized. Thus it may be of interest to publish the two following cases.

History of Case I

The patient, a male aged 30, was in the Army (R.A.S.C.) for seven years, from 1922 to 1929. He was said to have been a heavy drinker until married. There was a family history of tuberculosis. The illness began with a gradual loss of weight and cough. For three months before admission there was blood staining of sputum and also morning vomiting.

POST-MORTEM EXAMINATION

Necropsy revealed carcinoma of the pancreas with metastases in the liver, spleen, kidneys, suprarenals, thyroid, right lung, and lymphatic glands all over the body.

Both upper lobes of the lung showed groups of miliary tubercles with areas of slight fibrosis and emphysema. The left lower lobe was normal, except for small groups of miliary tubercles at the apex and an old calcified focus in one of the lymphatic glands at the bifurcation of the bronchus. The right lower lobe contained a solid mass, of about the size of a tennis ball, close to the hilum: the tissue was firm and yellow, and resembled that of the enlarged mediastinal and abdominal lymphatic glands. The centre of this mass contained some anthracotic lymphatic glands with foci the size of a pea (carcinomatous metastases). Around the large mass was a group of small nodes with distinct walls, some of them liquefied (tuberculous foci) (Plate, Fig. 1). The pleura was thickened and adherent over the right lower lobe.

HISTOLOGICAL EXAMINATION

The tumour in the pancreas, and the secondary nodes in liver, spleen, suprarenals, kidneys, and lymph glands, showed on section solid carcinoma, partially adenocarcinoma.

In the upper lobe of the right lung there was fibrosis, with emphysema; proliferating tuberculous foci in the nature of miliary tubercles, rich in connective tissue and with many giant cells in various places; and caseous endarteritis of smaller vessels.

In the right lower lobe the big node close to the hilum was a solid carcinoma. In the foci surrounding this node caseous tissue with partial liquefaction was found. There were numerous tubercle bacilli in several foci, especially those made up of leucocytes; there were fewer bacilli in the large caseous foci.

Further examination revealed recent, partially liquefying, round tuberculous foci in this lobe. The foci resembled those described as early round infiltrations giving rise to the isolated pulmonary tuberculosis of the adult (so-called "Rundherde"). Such foci in a multiple form were first described by R. von Jaksch-Wartenhorst[1] as pseudo-tuberculous cysticercosis of the lung, later by Lachmann[2]—as atypical tuberculosis resembling tumour metastasis—and recently by Alb. Fraenkel,[3] A. Albert,[4] and Straub. In this case these foci were found in one part of the lung only (the right lower lobe), where they occurred in the neighbourhood of a large carcinomatous metastasis. The pleura was thickened.

As regards other tuberculous foci there was a miliary distribution in both upper lobes, which were partially transformed into small fibrosing areas. No evidence was forthcoming to show that aspiration accounted for the recent infiltration in the right lower lobe.

Discussion

The condition of the lungs as a whole, and the presence of endarteritis in several vessels, point to the conclusion that the foci in the lower lobe were haematogenous tuberculous metastases. This was also suggested by the obvious haematogenous miliary tubercles in the upper lobes. Thus the case shows: (1) the haematogenous origin of recent tuberculous caseous circular foci of the lung; (2) a discrete spread of miliary tuberculosis preceding the development of the early caseous infiltrations; (3) that the distribution not only of miliary but also of larger caseous foci may be haemic in origin; (4) the importance of local conditions in the occurrence and growth of recent tuberculous foci; and (5) the difficulty of the differential diagnosis between carcinomatous and tuberculous infiltrations of the lung, both being present.

In this case there are two important features: (*a*) the presence of a large carcinomatous metastasis, by diminishing the resistance of certain areas, favoured the development of tuberculous foci from blood-borne tubercle bacilli; (*b*) the pleuritic thickening was probably responsible for the localization of the carcinomatous metastasis and so, indirectly, for the development of the recent adjacent tuberculous foci in this part of the lung.

History of Case II

The patient, a male aged 36, walked to a hospital outpatient department four days before death. *X*-ray examination disclosed a unilateral miliary condition of the lung. The patient died of bulbar paralysis.

Post-mortem Examination

Necropsy revealed a tuberculous meningitis, with some small conglomerate tubercles in the brain and cerebellum. There was also right-sided caseous epididymitis; caseous transformation of the right vesicula seminalis; caseous nodules in the right side of the prostate; and generalized miliary tuberculosis of the spleen, liver, and kidneys—especially the right. The left lung was adherent, with plastic fibrinous exudate over the pulmonary pleura: there were no miliary tubercles on the pleura, and no effusion. The right pleura, including the diaphragmatic reflection, was covered with miliary tubercles, which were also present in the right lung. The left lung was atelectatic, with a very few tubercles confined to the apex (Plate, Fig. 2).

Histological Examination

There was an exudative meningitis of the brain, conglomerate tubercles being surrounded by plasma cells and lymphocytes, with an evident increase of connective tissue. Miliary tubercles, with many giant cells and proliferating connective tissue, were present in the spleen, liver, and lymphatic glands, with caseous centres only in the right lung (Plate, Fig. 3). A considerable number of tubercle bacilli were seen in all tissues examined. There was caseous proliferation of the thoracic duct.

In various sections of the left lung only one or two very small tubercles were found in the apical region, adjacent to the walls of a small vessel and differing from those in the right lung by containing nothing more than giant and epithelioid cells (Plate, Fig. 4). There was no sign of caseation or of tubercle bacilli. Chronic collapse of the alveoli, with fibrosis of the walls and thickening of the covering pleura, with scattered caseous foci and several giant cells, were also observed.

Discussion

This case of acute generalized miliary tuberculosis presents the following points of interest:

(*a*) The first is the extremely short clinical course (four days). An acute meningitis and cortico-encephalitis were the cause of death, the fundamental miliary tuberculosis of the lung and the caseous tuberculosis of the urogenital organs being completely latent. From the histological picture, which showed numerous plasma cells and a considerable amount of connective tissue, the development of the tubercles in the brain must have commenced some weeks, if not months, before death. The fibrosis around the tuberculous foci in the spleen and lung suggests a lengthy duration of the miliary condition.

(*b*) The second point is the unilateral localization of the miliary outspread of the lung (involving difficulties in the clinical diagnosis); the freedom of one side of the chest from miliary tubercles was probably due to its chronic atelectatic condition, caused by an old and recent partially exudative pleurisy. The occurrence of unilateral miliary involvement of the lung was observed by Schmorl and Schottmüller,[5] the latter of whom pointed out its importance as an indication for artificial pneumothorax. Artificial pneumothorax should therefore be performed not only in order to keep the present foci undisturbed, but also, in producing atelectasis, to prevent the formation of new foci. There is no doubt that changes in the condition of the blood circulation are responsible for such events; this is demonstrated by cases of syphilis of the pulmonary artery, in which there is unilateral contraction of its branches and tuberculosis is limited to the same side (Hebb,[6] Pagel[7]), as well as by recent experimental observations (E. K. Wolff and Rob. Klopstock,[8] A. F. Vorwald[9]).

Summary

The first case demonstrates the haematogenous development of the early tuberculous, caseous, circular infiltrations known as the introduction of the isolated pulmonary tuberculosis of adult life ("Fruhinfiltrate," "Rundherde"). Both these show the importance of local factors in the development and localization of tuberculous foci.

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The Minister of Health, Sir Hilton Young, received a deputation on May 30th from the National Institute for the Deaf, the Counties Associations for the Deaf, the National College of Teachers of the Deaf, the Council of Church Missioners to the Deaf, and the British Deaf and Dumb Association. The deputation was introduced by Lord Charnwood, who spoke on behalf of all the societies represented. Their object was to suggest the necessity for legislation to make the welfare of the deaf the duty of local authorities, and to ask for the appointment of an advisory committee on the deaf. The Minister said in reply that he was in full sympathy with the desire of the deputation to promote the welfare of the deaf to the fullest possible extent. He believed, however, that progress was to be sought not in the imposition of compulsory duties on local authorities but in the encouragement of the work of these authorities and of voluntary agencies on the lines proposed in the circular on the subject issued by his Department (Circular 1337).

MALIGNANT TUMOURS OF THE KIDNEY AND TESTIS

BY

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(With Special Plate)

Malignant tumours of the kidney and testis are among the most interesting of all growths, both from a pathological and from a clinical point of view. Their importance lies in the marked degree of malignancy they show. In this communication I wish to draw attention to their pathology, and to record a case of an early hypernephroma of the kidney and of a seminoma of the testis.

Pathology of Malignant Disease of Kidney with Report of a Hypernephroma

The term "hypernephroma" (or Grawitz's tumour) implies an origin from the adrenal, but this conception is far from proved, and it is best to regard these tumours as renal carcinomas. The tumour has a well-marked tendency to invade and obstruct the renal pelvis, and so may produce a deformity which can be detected in a pyelogram. Microscopically their chief characteristics are their yellow colour, variegated appearance, and the frequent areas of haemorrhage. The cells are seen to be of large size, and the cytoplasm clear or slightly granular, due to the presence of lipoid granules. The cells may be arranged in rows or may have an alveolar arrangement. Stroma is scanty but the blood vessels large.

The other type of malignant growth is the embryoma (or Wilm's tumour). This tumour, which appears generally between the first and third years of childhood, is at times bilateral. It is soft in consistency and of grey or yellow colour: on section it is uniform in appearance. Microscopically the appearance may resemble a sarcoma or a mixed tumour.

According to Boyd[1] all malignant growths of the kidney can be placed in one or other of the above groups, but other observers maintain that there is a renal carcinoma in addition to the true hypernephroma. Graham Simpson,[2] in recording three such cases, emphasizes the fact that such tumours replace rather than displace kidney tissue, so that, clinically, there is an absence of any marked enlargement of the affected kidney. In addition, the renal carcinoma is the more malignant neoplasm, in all his cases producing secondary deposits in, and destruction of, some of the bodies of the lumbar vertebrae.

CASE REPORT

A. B., aged 43, was operated on in 1917 for a right subphrenic abscess, which continued to drain for twelve weeks. He stated that since then he had always had pain in his back when he lifted anything heavy, but this was not more marked on one side than on the other. He said that the trouble had increased during the last two years. On September 15th, 1933, he was admitted to the Manchester Victoria Memorial Jewish Hospital on account of a severe attack of renal colic on the right side. Microscopical examination of the urine revealed the presence of red blood cells, although there was no macroscopic evidence of blood. An *x*-ray of the urinary tract did not reveal any evidence of stone. After the injection of intravenous uroselectan a further *x*-ray revealed a normal appearance of the pelvis of the left kidney, but on the right side, instead of a uniform density as on the left side, the upper part of the shadow was extremely dense and somewhat enlarged.

Cystoscopy showed that the bladder and ureteric orifices were normal. Indigo-carmine, injected intravenously, was excreted by both kidneys in the average time and with equal force, the efflux from the right kidney appearing to be as deeply coloured as that from the left. Using 12½ per cent. sodium iodide through the ureteric catheter, a pyelogram was made of the pelvis of the right kidney. The resulting pyelogram was identical in appearance to that presented by the intravenous urose'ectan. The interpretation of the pyelograph was not clear, but it was suggested that such an appearance might be due to a stone which was not radio-opaque, or to a small growth obstructing the pelvis of the kidney. It was therefore decided to explore the affected kidney.

On October 4th, through a lumbar incision, the right kidney was exposed. Externally, no evidence of disease was found, and so a small incision was made into the convex margin of the kidney in order to explore it digitally, but this did not reveal anything abnormal. Bearing in mind the possibility of a small growth in the kidney, this organ was then excised. This turned out to be a difficult operation on account of the dense adhesions present, resulting from the former perinephritic abscess. Convalescence was uneventful, and the patient returned to his work as an engineer in two months' time.

Pathological Specimen.—On cutting the kidney longitudinally from the outer to the inner border, a small tumour was revealed. Macroscopically and microscopically this had the appearance of a hypernephroma. This growth obstructed the upper part of the pelvis, producing a dilated and thickened upper compartment, which explained the appearance presented by the pyelogram, due to the large collection of radio-opaque material which would collect in it.

The special points of interest in the case are the very small size of the growth and the unusual appearance presented by the pyelogram. The photographs (reproduced on the Plate) show: Fig. 1, the specimen removed; Fig. 2, microphotograph of tumour showing typical appearance of the hypernephroma.

Pathology of Malignant Disease of Testis with Report of a Seminoma

The modern conception of tumours of the testis is a simple one when compared to the old complicated classification. They are now generally placed in one of two groups: first, the germinal cell tumour, or seminoma,[1] and secondly, the teratoma. The seminoma seems to arise from the cells lining the seminiferous tubules. The tumour appears in middle life, and is of comparatively slow growth. On section the tumour is seen to be solid, fleshy, and homogeneous, often traversed by fibrous septa, which cause a lobulated appearance. The microscopical appearance varies, the cells being of either large size, with clear protoplasm, or small size, containing a darkly staining nucleus, giving rise to a picture like that of lymphosarcoma. A tubular arrangement may be apparent in the slow-growing tumours, or else a diffuse arrangement.

A teratoma probably arises from the primitive germinal cells, which, being totipotent, produce structures derived from all three primitive layers. It presents, as a rule, a markedly cystic appearance, but parts or the whole of the tumour may be solid. Microscopically, derivations of all three germinal layers may be seen in varying proportions.

CASE REPORT

T. W., aged 57, complained of a painless swelling of the right testis, starting six months previously. There had been a gradual increase in size of the affected testis since the onset. There was no history of gonorrhoea, tuberculosis, or other infection. Examination showed that the body of the right testicle was enlarged to about four times its ordinary size, and, in addition, the globus major of the epididymis was markedly bigger than normal. The organ was not tender. Rectal examination did not reveal any abnormality of the prostate gland or vesiculae seminales. A provisional diagnosis of tuberculous epididymitis was made, and, as the disease seemed entirely confined to the one testis, operation was advised.

When the testis was exposed the body seemed very hard, and neoplasm was then suspected; the whole testis was therefore excised, together with the spermatic cord, as far as the internal abdominal ring. On cutting the testis longitudinally a neoplasm infiltrating the body and also appearing in the epididymis was seen. The lumbar lymphatic glands were not

excised, but, as soon as the operation wound was healed, these were treated with *x* rays. Unfortunately this patient has been lost sight of, and has not continued to attend for the *x*-ray treatment or replied to recent communications.

Pathological Specimen.—The report, made by Dr. William Susman, stated that the microscopical appearance was typical of a seminoma. The growth was somewhat necrotic and very cellular, with scanty stroma. The cells were large and spheroidal, showing no conspicuous amount of mitotic division. Judging by the microscopical appearance the pathologist considered the growth to be undoubtedly malignant, but there was nothing to indicate whether or not it was rapidly growing.

The photographs (reproduced on the Plate) show: Fig. 3, the affected testis divided longitudinally; and Fig. 4, microphotograph of the neoplasm.

My thanks are due to Dr. S. Kelly, who called me into consultation respecting the case of hypernephroma; to Dr. H. Morris, for the *x*-ray reports; and to Mr. J. B. Macalpine, who kindly gave advice on the interpretation of these.

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GIANT RENAL CALCULUS

BY

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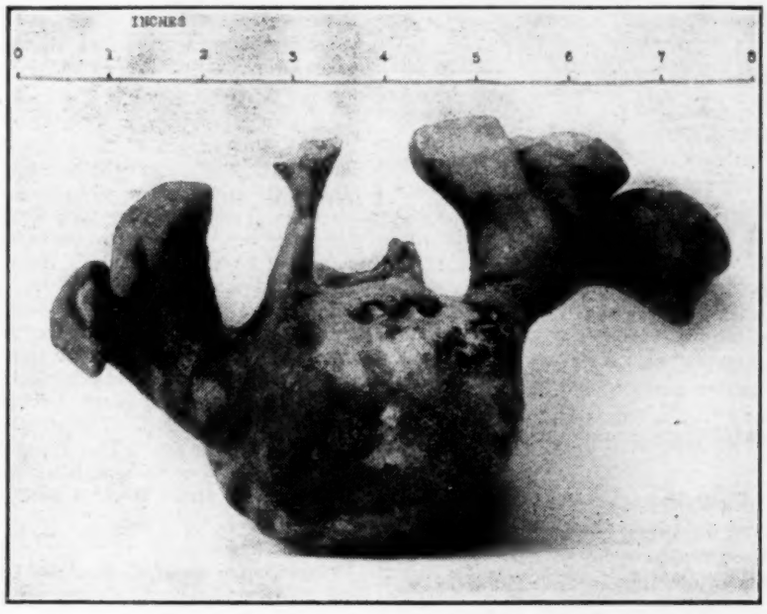
(With Special Plate)

It is unusual to observe giant renal calculi, so that the case here recorded would merit a report. The largest renal calculus in the museum of the Royal College of Surgeons of England was successfully removed from a male at operation by Mr. Hurry Fenwick in 1912, and weighed 1 lb. 9½ oz. The largest in the museum of the Royal College of Surgeons of Edinburgh weighs 1 lb. 9 oz., and was successfully removed, also from a male.



Marmaduke Shields reports the removal of a stone 1 lb. 0½ oz. in weight from a male aged 39. He states that there is an enormous stone weighing 2 lb. 0¾ oz. in the museum of St. Bartholomew's Hospital, which was removed from a man aged 38. Thomson-Walker mentions that LeDenti reported a stone weighing over 3 lb., but whether this was removed at operation or necropsy is not stated. Kreutzmann reports the removal of a stone weighing 650 grams (*circ.* 1 lb. 7 oz.), and under a careful review of the literature states that the largest single stone removed at operation was reported by Mylvaganam, and weighed 3 lb. Kreutzmann quotes eight cases of unusually large renal calculi, the smallest stone weighing 339 grams (*circ.* 12 oz.), occurring in the only female in the series. Waterworth, in 1932, reported a stone weighing 2.42 lb. associated with carcinoma of the same kidney.

Clinical Case Record

A woman, aged 59, was admitted to the Royal Hants County Hospital, Winchester, on November 1st, 1933, complaining of a mass in the right side of the abdomen, accompanied by pain.

History of Illness

The date of the onset was given as in November, 1929. At that time the patient went to a doctor complaining of an aching pain in the back accompanied by scalding micturition, and the passing of blood-stained urine. She was treated by her doctor, and the pain and urinary disturbance passed off, and for twelve months thereafter there was no complaint. In November, 1932, however, the aching pain in the right loin and right hypochondrium recurred occasionally, and was worse after a day's hard work. When examined upon admission to hospital there was no complaint of any urinary disturbance, but the patient stated that she had lost her appetite and had been losing weight during the last twelve months. The pain had never been of an acute character, and she was always able to continue with her household duties. She had had no colic or rigors. She had borne eleven children, and her pregnancies had been uncomplicated.

Physical Examination

On admission to hospital the patient was an ill-nourished, spare woman. Her extremities were cold and blue; her pulse was 100, and was small and of very low tension; her respiration was 20, and her temperature 97°. Her condition was one of advancing uraemia. There was marked oral sepsis and dental caries, and the tongue was dry and glazed. Examination of the heart and lungs failed to reveal any evidence of disease. Blood pressure was 100/50. On inspection, the abdomen showed a large bulging mass in the right side extending from the right iliac fossa up underneath the right costal margin. The medial margin of the tumour crossed the mid-line in the epigastrium for about an inch, and the mass could be seen to move upon respiration when the patient was recumbent. On palpation the large mass was found to be slightly nodular, and two hard projections could be felt in the right iliac fossa. The whole tumour was tender, but tenderness was most acute over the projections at its lower end.

The specific gravity of the urine was 1020; it contained no sugar, but blood, albumin, and pus were present. The amount recorded during the day varied from 16 to 36 ounces. Many white and red blood cells were present. The blood urea equalled 355 mg. per 100 c.cm. nine days before death.

X-ray examination revealed on the right side a large, branched calculus with an ovoid central portion filling the pelvis. The left kidney also contained multiple calculi. Examination of the renal function with uroselectan showed no urine coming from the left kidney, and demonstrated a small amount in the right pelvic ureter after thirty-five minutes.

Operative treatment was out of the question, and the patient died on the sixteenth day after admission to hospital,

the cause of death being uraemia following bilateral calculous pyonephrosis. Only on the second and third days did the temperature rise above the normal, when in the evenings it was 100° and 102° respectively.

Post-mortem Examination: Abdomen only

Both kidneys were removed; the right one measured 9 inches long, 7 inches broad, and 5 inches thick, and weighed 4 lb., while the left one weighed 12 oz. The left kidney showed many hydronephrotic sacs with very little renal substance, and contained multiple calculi. The right kidney contained a large stone, and showed a scar on its anterior aspect in the region of fracture of one of the branches of the stone where probable ulceration had previously taken place. This kidney also contained many hydronephrotic sacs, and upon opening these urine and thick sanious pus were found. Outside the renal pelvis the kidney substance was replaced by fibro-fatty material, which was 1½ inches thick in some places. In the right kidney were found one large branched calculus weighing 1 lb. 3¾ oz., and two rough portions which had evidently broken off at a former date. There was very little renal substance left, and this was infiltrated with multiple abscesses. Three polished stones were lying in one of the cavities. The gall-bladder was normal and contained no calculi; other organs showed no abnormalities. The total weight of the calculi immediately after removal from the right kidney was 1 lb. 6 oz.

Description of Stone

The stone is composed of a solid central portion, ovoid in shape, which presents at its lower aspect definite curved indentations, where it has impinged against the vertebrae and transverse spinal processes. There is also a flattened area, where it has pressed against a vertebra. The length of the central portion is 4 inches, its transverse circumference 9 inches, and its vertical circumference 9½ inches. At its lower pole is one trunk breaking up into four branches. From the central portion posteriorly are two small horns, and anteriorly a long thin branch about 2 inches long, from which, obviously, one of the free portions of stone has broken away (See Plate). At the upper end, attached to one trunk, are again four branches. The longitudinal circumference of the entire stone is 18 inches.

Remarks

As is so often reported in cases of large stone there had been little or no disability in spite of a duration of many years. The case is interesting in that the calculus formed a large visible and palpable tumour in the right side. It would appear that giant renal calculus is more common in the male, and that probably this stone is the largest yet recorded taken from the female kidney.

The case was sent to me by Dr. Leonard Oliver of Ropley, Hants.

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RADIOGRAPHY OF CALCIFICATION IN CARDIAC VALVES DURING LIFE

BY

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(With Special Plate)

Following the description in 1933 by Sosman and Wosika,[1] and Bishop and Roesler,[2] of calcification in the cardiac valves, we have attempted to demonstrate these calcifications radioscopically. One of us (C. E.) selected clinical cases which were likely to show these calcifications, and they were revealed in the first case examined. The clinical and radiological findings are briefly described, together with the radiographic technique used to demonstrate such a lesion.

History of Case

A married woman, aged 52 years, had for twenty months complained of pain in the sternal region, which occurred chiefly on hurrying, and very occasionally when sitting still. There was giddiness on sitting up suddenly or stooping; and sometimes shortness of breath. There was no history of rheumatism or growing pains.

Clinical Findings

The patient was a little cyanosed, and not obviously short of breath. The heart was enlarged slightly, the apex being in the fifth space in the mid-clavicular line, the impulse being heaving. There was a systolic thrill in the second right intercostal space. On auscultation an apical systolic murmur was conducted to the axilla, and the second sound was followed by a faint diastolic murmur. At the aortic base a systolic murmur was present and was conducted into the neck; along the left border of the sternum there was a faint diastolic murmur. The pulse had a frequency of 68, the rhythm was regular, and the wave had a slow rise and fall. The radial and brachial arteries were thickened. The blood pressure was 170/130 mm. Hg. The remainder of the physical examination was negative. The blood Wassermann reaction was negative, and the electrocardiogram was physiological. The diagnosis was aortic stenosis with arteriosclerosis and hypertension.

X-Ray Findings

Fluoroscopy revealed that the heart was centrally placed, and the mediastinal shadow considerably widened; the widening was thought to be due to enlargement of the aortic arch. On rotation of the patient into the semi-oblique position a well-marked comma-shaped area of calcification was visible in the position of the aortic valve. The movement of this shadow was considerable: it was more fixed at the upper end, and showed a jerking movement somewhat similar to that of a pendulum, the lower margin moving about a centimetre at each impulse. The movement was mainly backwards and to the patient's right. The shadow could be seen in both the right and the left oblique positions, and was very clear in the left lateral position, the convexity being forwards. The radiograms indicate the central position of the heart and the position of the calcified area in the anterior right semi-oblique and left semi-oblique positions (see Special Plate).

Radiographic Technique

It was pointed out by Sosman that it was remarkable that the means for the demonstration of these lesions had been available for at least thirty years, and that this possibility had only just been recognized, for the calcifications can be observed readily on the screen, provided that the eyes are adequately adapted, and that the screen examination is made

with a sufficiently small diaphragm. We have, in addition, the advantage of using a new Levy screen, which has three times the brightness of an ordinary fluorescent screen, and the contrast is made by screening through the Lysholm grid. The radiographic demonstration of such lesions is naturally more difficult, and will vary with the power of the apparatus available, the object being to obtain the shortest possible exposure, so that the view may be taken without any blurring from cardiac movement. The ideal will naturally be obtained by using very high milliamperage with a suitable small cone. The radiographs submitted were taken with only 100 mA and 1/25 of a second exposure by reducing the focal film distance to twenty-four inches, but there may be advantages in employing 1,000 mA and 1/100 of a second exposure if such a powerful apparatus, which is already on the market, is available.

Significance of Calcification in Heart Valves

Calcification in the heart valves may be present as the nodular type described by Monckëberg,[3] a condition of subendocardial calcification in the aortic valve occurring in middle or old age, and of doubtful relation to atheroma. Calcification to a lesser degree is associated with atheroma and as a result of valvulitis—rheumatic, subacute bacterial, or syphilitic. In the nodular calcified group the portion of the valve near the aortic attachment is affected ; disease of the adjoining aorta is usually absent. In atheroma the attached portion of the valve is most likely to be calcified, while in rheumatic valvulitis the free edge of the valve would contain the calcium deposits. In subacute bacterial endocarditis bizarre areas of calcification are not uncommonly seen. Calcification of the aortic valve and atheroma of the aorta would indicate disease of the mouths of the coronary arteries and the possibility of occlusion. In rheumatic endocarditis valvular calcification would be evidence of local healing ; and in subacute bacterial endocarditis the calcium deposits would show that the body was making an effort to combat the disease. (It would be particularly interesting to examine by this new technique patients who are stated to have recovered from this disease.) In syphilitic heart disease calcium deposit would suggest the coexistence of atheroma.

The presence of a landmark within the heart will be of assistance in giving anatomical significance to radiographic findings. Both coronary arteries arise from the sinuses of Valsalva of the aortic valve, and it may be possible to map out the usual distribution of the arteries and to localize small areas of calcification as being in the course of these vessels. (We are carrying out experiments on post-mortem specimens along these lines.)

We are indebted to Dr. Geoffrey Evans for permission to publish this case, and to Dr. Finzi for allowing us to reproduce the radiograms, which were taken in the *x*-ray department at St. Bartholomew's Hospital.

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The first issue for 1934 of *The Fight Against Disease*, the quarterly journal of the Research Defence Society, contains an account of the debates held in the Universities of Manchester and Glasgow. In each case the voting went heavily against the supporters of antivivisection. Sir Leonard Rogers spoke on both occasions, and instanced the many advances in therapy which had been rendered possible by animal experiments. The issue also contains an account of the research regulations in Germany, the prevention and cure of certain common diseases of animals, and a critical examination of recent antivaccination and antivivisection propaganda. Professor Edward Mellanby has become a vice-president of the Research Defence Society and a member of the general committee.

A CONTRIBUTION TO THE CHOICE OF ANAESTHETIC

BY

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In view of the prevalence of new forms of general anaesthesia the case to be described below should prove of interest. The patient was under the care of Mr. D. Ligat in the ear, nose, and throat department of the Buchanan Hospital, St. Leonards-on-Sea, and had treatment which necessitated four general anaesthetics within a period of thirty-one days. She was given a different type of general anaesthetic on each occasion, and in my opinion a description of their effects from the surgeon's, patient's, and anaesthetist's point of view should prove helpful.

The following anaesthetics were used in the order given: (1) chloroform and ether ; (3) sodium evipan ; (3) avertin with gas and oxygen ; (4) evipan with premedication.

Case Record

The patient, a single woman aged 31 (weight 9 st. 6½ lb.), gave a history of chronic otorrhoea of left ear since an attack of scarlet fever at the age of 10. She was admitted for persistent otorrhoea, deafness, and tenderness over the left mastoid. On examination nothing abnormal was found apart from the ear trouble. The blood pressure was 130/70.

First Operation.—Two days after admission a radical mastoid operation was performed under chloroform and ether anaesthesia with a preoperative injection of 1/100 grain of atropine sulphate. The patient was induced with C_1E_3, after which the percentage of chloroform was gradually reduced to about 10. The anaesthetic was administered for one and a half hours. The temperatures and pulse rates before and after the operation and twenty-four hours later were respectively 97.4° and 68, 98° and 90, and 99.6° and 88. The patient was very sick for twenty-four hours, and complained of nausea for three days.

Second Operation.—Four days after the operation the wound was redressed under evipan anaesthesia. Eight c.cm. of the standard solution of sodium evipan was injected intravenously in one and a half minutes (the first 4 c.cm. in one minute). Complete anaesthesia, lasting ten minutes, was obtained. The temperatures and pulse rates, as above, were respectively 98.6° and 78, 98.8° and 84, and 98.6° and 86. The patient complained of slight headache the next day.

Third Operation.—Twenty days after the first operation two Thiersch's grafts were applied to the ear cavity under avertin and gas-and-oxygen anaesthesia. One hundred minims of avertin dissolved in 8½ oz. of distilled water at 40° C. were given rectally forty minutes before admission to the theatre. A nasal intratracheal tube was introduced under gas and oxygen, which was administered for thirty minutes. The temperatures and pulse rates, as above, were respectively 98° and 80, 98° and 78, and 98° and 80. The patient was restless for some hours after readmission to the ward.

Fourth Operation.—Thirty-one days after the first operation diathermy of the left inferior turbinate and stump of the middle turbinate was performed under evipan anaesthesia with premedication. Omnopon 2/3 grain and scopolamine 1/150 grain were injected subcutaneously, one hour before the intravenous injection of sodium evipan. Nine c.cm. of the standard solution of the latter was injected in one and a half minutes (4 c.cm. in the first minute). The patient became comatose in forty-five seconds, and four minutes after the commencement of the injection, while diathermy was in progress, the patient began muttering but did not move. Diathermy was completed one minute later, and the patient was sent back to the ward asleep. Soon after being put back to bed she complained of feeling cold and breathless, and began twitching. She became cyanosed, and about fifty minutes after the evipan injection she stopped breathing. She was completely relaxed, had a ghastly colour, and at first sight appeared dead ; but on examination the pulse was found to be regular but weak, and about 60 to the minute. Artificial

respiration was applied and oxygen administered. The colour improved rapidly, the patient was conscious, and talked within ten minutes of the commencement of the attack. One hour later she stopped breathing again. This time apnoea lasted five minutes, and the pulse rate dropped to 40 per minute. The same treatment was applied, and 1 c.cm. of icoral was injected subcutaneously. The patient was conscious again within ten minutes of the commencement of the attack. One and a half hours later there was a recurrence of the above symptoms lasting two minutes. For eight hours the patient complained of being unable to breathe naturally. The temperatures and pulse rates, as above, were respectively 98° and 80, 98.6° and 102, and 98.6° and 84. The blood pressure twenty-four hours after the operation was 104/70, and rose to 125/75 on the second day.

Discussion

The patient was not acutely ill at any time ; her general condition was very good, and clinically the same for all four anaesthetics. The operative procedures varied in each instance, but, except for the first operation, were of a minor nature, and not sufficient to cause surgical shock of any degree. Some of the nausea and sickness following the first operation was undoubtedly due to the operation itself, and the anaesthetic was given for a longer period than for the other operations ; but even with these reservations the post-anaesthetic discomfort seemed out of proportion when compared with that noticed in the case of the other anaesthetics. The patient also informed me that she had been " just as sick " following a short chloroform and ether anaesthetic for a submucous resection a year before. The temperatures and pulse rates given were taken in the morning and evening of the operation day, and the following evening. They show the least reaction with avertin, and the most with chloroform and ether, and evipan with premedication.

The surgeon has stated that, as far as he was concerned, all four anaesthetics were satisfactory. The anaesthetist found the simplest method was with chloroform and ether, and sodium evipan required but little preparation. Avertin had the disadvantage of requiring more time, as the solution had to be prepared about one hour before the operation.

The patient's point of view was summed up as follows. (1) *Chloroform and ether :* " Not so bad as people make out." " I don't like going under, but it doesn't last long." " It's the after-effects that are worse: I was sick all that day, and felt sick for days, and couldn't get rid of the smell." (2) *Evipan alone :* " I don't remember much except the needle prick and going off with a bump." (3) *Avertin, gas and oxygen :* " I just fell asleep and don't remember anything of what happened that day." (4) *Evipan with premedication :* " I thought it was the same as I had before, but that something went wrong." " I can remember something hurting terribly in my nose, and saying that it hurt, but I couldn't move. Then I don't remember anything till I was wheeled into the ward ; I felt cold and couldn't breathe. I don't remember having any injections in bed." When asked which anaesthetic she would choose if she had to have another operation the patient replied, " The one I had in bed " —that is, avertin. When asked to give reasons, she replied: " It's the nicest going off, and upset me least afterwards." Evipan alone was given as second choice, and chloroform and ether was by far the worst.

The opinion of the nursing staff was that avertin caused more work and trouble than any of the other anaesthetics. The patient had to be watched carefully during the rectal injection, and was comatose for a prolonged period after the operation. Noises in the ward caused much restlessness, and she had to be under constant supervision. This has been noted in most hospital cases. In nursing homes and private wards a much quieter atmosphere can be maintained, and the patient has no period of restlessness.

Evipan with premedication was not successful in this case. This is rather surprising, in view of the fact that some days previously evipan alone had given an excellent result. I can give no explanation of this, but the case illustrates clearly the depressant action of evipan on the respiratory centre and also its selectivity for that centre. Three periods of apnoea occurred while the pulse remained good, except for a fall to 40 per minute for a short time. The case shows clearly that evipan is a " safe " anaesthetic in so far as, with normal doses, the cardiac centre seems to be very little affected.

Summary and Conclusions

1. A case has been described in which four different types of general anaesthetics were administered within a period of thirty-one days.

2. A description of the anaesthetics has been given.

3. The anaesthetics have been discussed from the patient's, the surgeon's, the anaesthetist's, and the nurse's point of view.

4. Avertin, with gas and oxygen, in this case, appears to be the most satisfactory form of anaesthetic, though the administration requires more time and attention.

5. Evipan alone proved very satisfactory in this case, and the selectivity of this drug for the respiratory centre is clearly illustrated.

In conclusion I would like to thank Mr. D. Ligat for his help and permission to publish this case. My thanks are also due to Dr. Grace and Dr. Hall for particulars of the first two anaesthetics.

Clinical Memoranda

COMPLETE CONGENITAL DIAPHRAGMATIC HERNIA IN AN ADULT: OPERATION

(With Special Plate)

The comparative infrequency of congenital diaphragmatic hernia in adult life renders this case of interest.

A healthy German girl, aged 20, who was on holiday in England, was recently admitted to the Farnborough Hospital as a case of acute pancreatitis. She had vomited once or twice, was somewhat collapsed, and had severe pain in the epigastrium. There was also severe pain in the region of the left shoulder. The temperature was 99.2° F., the pulse 120, and the respirations 26. The upper abdomen was slightly rigid. The heart sounds were heard on the right side, and breath sounds were deficient over the whole of the left lower chest. The diaphragmatic hernia was not suspected before operation, in spite of the dextrocardia.

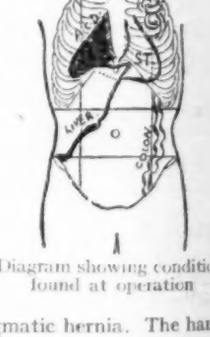


Diagram showing condition found at operation

On opening the abdomen there was a small quantity of free fluid which was slightly blood-stained, but the only viscera present were a collapsed descending colon, an enlarged and prolapsed liver, and the pelvic organs. The right Fallopian tube was lying in contact with the gall-bladder. High in the epigastrium could be felt the tense and distended lower end of the stomach. The emptiness of the peritoneal cavity and the complete absence of palpable and visible small gut led to a diagnosis of diaphragmatic hernia. The hand could be passed a little way into the chest along the greater curvature of the stomach, but owing to the enormous distension of this organ it was impossible to proceed further until the contents had been drained off. A stomach wash had not been given before the anaesthetic as there had been no symptoms of intestinal obstruction. After packing off the lower end of the stomach a catheter was inserted through a purse-string suture, and several pints of fluid were withdrawn. It was now possible to withdraw the stomach completely from the chest

by means of gentle traction during each expiration; with it came the spleen, which was completely mobile. On passing the hand through the hernial orifice it was found that the left half of the diaphragm was almost completely absent. The chest contained all the small intestine, the omentum, and most of the large gut; it was possible to palpate the ribs almost up to the clavicle on this side. The intestines themselves did not appear to be distended, and in any case could not be mobilized. The patient's condition was very poor at this stage, and she was therefore returned to the ward, half a pint of warm saline being left in the peritoneal cavity.

She made fair progress for several days, and the bowels were well opened. There was a troublesome post-anaesthetic cough, and on the sixth day it appeared that the stomach passed back into the chest and again became obstructed. The patient vomited copiously, in spite of repeated aspiration of the stomach contents, and died on the seventh day after the operation.

An *x*-ray photograph taken in bed showed coils of small intestine occupying the upper half of the left chest. Unfortunately, permission for a post-mortem examination could not be obtained. It is interesting to note that the girl's parents stated that she had always been an ardent gymnast and had enjoyed perfect health throughout her life. She had complained occasionally of flatulence, and was unable to drink aerated waters.

JOHN F. HACKWOOD,
M.D.Lond., F.R.C.S.

Farnborough, Kent.

TREATMENT OF CLIMACTERIC HYPERPIESIA BY ARTIFICIAL MENOPAUSE

The following case, which is described in detail, may be of interest as suggestive of the hopeful prognosis which may be given if the treatment advocated is adopted in this particular type of high blood pressure.

In January, 1932, the patient, a married woman of 45, was suffering severely from symptoms of hyperpiesia, her usual systolic pressure being 220 mm. She had extensive retinal haemorrhages, and her condition was thought to be due to chronic nephritis, and was investigated thoroughly from this point of view; but the urine, blood urea, and urea concentration tests were found to be normal. The laevulose test was also normal, and showed no evidence of hepatic insufficiency. The Wassermann reaction was negative, the differential blood count was normal, and *x* rays showed no abnormality of the alimentary tract, nor was there any bacteriological evidence of intestinal or urinary infection. The teeth and antra were thoroughly examined and *x*-rayed, and found to be healthy, and there was no obvious sign or symptom of pelvic disease; the patient had had five children, of whom four were alive, and no miscarriages, and the periods occurred regularly every four weeks, being normal in amount and duration, with no sign of cessation, the patient's mother not having had a menopause until the age of 50. Her appearance suggested a slight hypothyroidism, and the basal metabolism was found to be −10 to −15 per cent. She was kept under observation for nine months, and it was found that her blood pressure rose and her symptoms were accentuated by each menstrual period, the occipital headache, which was a fairly constant symptom, becoming much worse at these times and a good deal of emotional disturbance occurring.

An artificial menopause suggested itself as a means of at least alleviating these severe exacerbations of the trouble, and this was carried out by means of radium in November, 1932, by Mr. Eardley Holland. She had two periods afterwards and has had none since. Her blood pressure gradually fell to 160–175 systolic, and has remained at that level without exception. The occipital headache has entirely disappeared, and the eye condition has improved to a surprising degree, there having been no fresh retinal haemorrhages in the last eighteen months. The whole condition of the patient has changed from invalidism to a life of ordinary activity.

In conclusion, I should like to thank Mr. Eardley Holland, who carried out the insertion of radium, for permission to publish these notes.

L. SHILLITO, M.B., B.CH.

Hurstmonceux.

Reviews

THE MEDICAL ANNUAL

In their introduction to the *Medical Annual* for 1934[1] the editors, Dr. LETHEBY TIDY and Mr. RENDLE SHORT, remark that "an occasional grumble is heard that there is too much for the specialist and not enough for the general practitioner, particularly in the way of simple methods of treatment." They reply that this point has not been lost sight of, and that, although the *Medical Annual* is in the main a conspectus of current medical literature, special articles of practical value are included each year which are written independently of the literature. In our review of the 1933 volume we suggested that this yearbook was remarkable in that it had something to offer to the student and to the general practitioner and to the specialist. In the new volume there are a "considerable number of therapeutic hints for the family doctor," but we think that those who have grumbled should not forget that both general practitioners and specialists *are* doctors who have received the same basic education. What is sauce for one should be sauce for the other, for if the general practitioner is not aware of what the various specialists are up to he will not know how and when he should avail himself of their special activities for the benefit of his patients.

There is, however, one problem which is of particular concern to the general practitioner—national health insurance practice—and we welcome in the present issue of the *Medical Annual* the excellent article on this subject by Dr. E. Kaye Le Fleming. In a clear and concise manner he explains how "the first big scheme of preventive medicine applied to general practice" is carried out by the 19,000 medical men engaged in this work in England and Wales and Scotland.

Where there is no chaff one cannot separate the wheat, but for convenience of review it may be permissible to distinguish between an abstract (specialist) wheat and a real (practical) wheat. Of the latter variety there is plenty, and, if the verbal somersault is allowed, such articles as those on cosmetics, stammering, vitamins, insomnia, anaemia, drunkenness, and anaesthesia—among many others—will make a ready appeal to the busy general practitioner who wants to lay his hands on something tangible. We should also like to draw attention to the extremely useful Practitioners' Index at the end of the book, where short descriptions of new drugs and medical and surgical appliances, lists of books, and details of special homes, institutions, spas, sanatoria, and medical societies can all readily be found with a flick of the thumb.

PROBLEMS OF LIFE AND MIND

Dr. C. G. JUNG'S book on *Modern Man in Search of a Soul*[2] is a translation into English of a series of essays that have, in most instances, been delivered as lectures. Among the subjects discussed are dream analysis, the aims of psychotherapy, the stages of life, archaic man, the basic postulates of analytic psychology, and the spiritual problem of modern man—all these topics being approached from the standpoint of the analytic psychology of which Jung is the founder. With considerable courage the author ventures to suggest the possibility of

[1] *The Medical Annual: A Yearbook of Treatment and Practitioners' Index.* Edited by H. Letheby Tidy, M.A., M.D., F.R.C.P., and A. Rendle Short, M.D., B.S., B.Sc., F.R.C.S. Fifty-second year. Bristol: J. Wright and Sons, Ltd.; London: Simpkin Marshall, Ltd. 1934. (Pp. 644; illustrated. 20s. net.)

[2] *Modern Man in Search of a Soul.* By C. G. Jung. London: Kegan Paul, Trench, Trubner and Co. Ltd. 1933. (Pp. ix + 282. 10s. 6d. net.)

a "psychology with the psyche"—that is, a field of study based on the assumption of an autonomous psyche. He contends that since we have no idea of the way in which what is psychic can arise from physical elements, and yet cannot deny the reality of psychic events, we are free to frame our assumptions the other way about for once, and hold that the psyche arises from a spiritual principle which is inaccessible to matter. In practice, of course, all psychotherapeutists deal with their patients as if the mind—conscious and unconscious—were independent of the body, and it matters but little whether they accept or deny the existence of an independent entity or soul. The actual differences between the dynamic schools of psychopathology are to be found in therapeutic techniques and in the conceptions as to the nature and content of the unconscious. Jung's conception of the unconscious is certainly impressive. In addition to repressed material Jung recognizes a collective unconscious, this being the repository of primitive images or "archetypes of apprehension," which represent both the past stages of racial development and also the future potentialities. From this racial unconscious all creative possibilities and all the dynamic powers of the psyche are assumed to issue.

The technique of analytic therapy would seem to be difficult to explain, and it could obviously only be understood by those who have been themselves analysed. The results of treatment suggest a state of mind analogous to that occurring in religious conversion. The analysis is mainly concerned with the dreams of the patient, the aim being to convert the destructive powers of the unconscious into healing forces. The archetypes come to independent life and serve as spiritual guides for the personality, thus supplanting the inadequate ego with its futile willing and striving. When the patient has gained access to the hidden sources of psychic life it is found that this marks the beginning of the cure.

Dr. Jung reveals himself once more as an independent and original thinker and psychologist, and we can confidently recommend his book to those who are interested in the problems of life and mind. It certainly creates an impression that the educated classes in Switzerland who find difficulty in adjusting to the problems of life are seeking help more and more from the psychotherapeutists.

CLINICAL PHYSIOLOGY OF THE EYE

In a recent discussion between some budding doctors, one of them, a man with a brilliant academic career, said that as far as eye work was concerned that had become so scientific as to have lost the zest of search; certainty and stability had destroyed the romance of the unknown. If anyone should seriously be of this mind he might well study a book entitled *Clinical Studies on the Physiology of the Eye*,[3] by J. GRANDSON BYRNE. In this work there is collected a series of observations on the eye which are full of interest, and calculated to arouse in the most complacent of methodical clinicians a new spirit of inquiry and perhaps of vehement opposition. The author first considers the relation of the critical and affective nervous systems, then the effector mechanisms which mediate palpebral, pupillary, and lens movements. Next follow observations on the paradoxical pupillary dilatation and constriction associated with somatic lesions and the mechanism of accommodation, and on visceral disorders associated with referred pain and hyperalgesia. There are other chapters, but these form the main contents.

There is no medical practitioner who does not know the phenomenon of the Argyll Robertson pupil and its significance, and also something of the nervous mechanism of its production. That reaction is an exemplar of many others, and it is with these that Dr. Byrne's book is particularly concerned. He enters into a fuller explanation of the Argyll Robertson phenomenon, and propounds other rarer and less certain pupillary reactions set up by local and general bodily disorders. For some of these he makes out a good case; others—for example, "pupil inequality and ulcer of the leg"—seem somewhat too subtle and leave room for doubt, yet there is enough apparent evidence to warrant further investigation. The author draws a most practical moral from his observations in these words:

> "From the foregoing it is apparent that the practice of ophthalmology, like that of any other specialty, should be undertaken only by one who has had a thorough training in the theory and practice of medicine, followed by a long period (*plurimos annos*) of general practice. The determination of the patient's refraction and the prescribing of glasses may seem to be an easy matter, but—from the standpoint of the patient's welfare in general, not to mention the early, complete, and speedy recovery of ocular function—it is by no means an easy matter, and should not be so regarded by anyone who assumes the responsibility of treating disordered ocular function."

THE DEVELOPMENT OF RADIOLOGY

The Science of Radiology,[4] edited by OTTO GLASSER, is a charming book of infinite variety. In 1929 steps were taken to organize a congress of radiology in connexion with the project for holding an international exposition in Chicago, which would deal with the progress of science during the past 100 years. In 1931 the four national radiological organizations of North America decided to co-operate in the organization of the first American Congress of Radiology. Dr. Byron H. Jackson of Scranton, Pennsylvania, was appointed chairman of the committee on history and education. One of the duties of this committee was the editing of a book that would denote the outstanding features developed in the science of radiology from the time of Roentgen's discovery up to the period of the congress. Dr. Otto Glasser was appointed editor, and with the assistance of twenty-five contributors, each of whom is an authority on the special branch of the subject on which he writes, he has produced a book of a character unique in the history of radiology. Although the volume deals mainly with the development of radiology in the United States, the book has an international appeal, for the authors have drawn upon the radiological literature of all countries.

In the opening chapter Dr. Glasser, who is the author of the standard work on the life of Roentgen, describes the discovery of the Roentgen rays, and gives a very brief account of Roentgen's life, effectively disposing of the myths and fables which became associated with the great discovery. Then follows a short account of the discovery of radium by Pierre and Marie Curie, due credit being given to Henri Poincaré, the French scientist, who a few weeks after Roentgen's discovery suggested the investigation of fluorescent substances, and to Henri Becquerel, who undertook their systematic study. Becquerel's experiments with uranium salts and their action on photographic plates led to the discovery that penetrating and invisible rays were emitted from all uranium compounds, whether these were fluorescent or not. His work showed that these rays were similar to the *x* rays, and that they were a special property of the atom itself; in fact, an entirely new property of matter had been discovered. The story is then told of Pierre and Marie Curie's research work on the Becquerel radiation, and, finally, of their discovery of radium. On these

[3] *Clinical Studies on the Physiology of the Eye*. By J. Grandson Byrne, M.A., M.D. London, H. K. Lewis and Co., Ltd. 1934. (Pp. 144; 39 figures. 10s. 6d. net.)

[4] *The Science of Radiology*. Edited by Otto Glasser, Ph.D. London: Baillière, Tindall and Cox. 1933. (Pp. xiv + 450; 108 figures. 25s.)

foundations the whole science of radiology has been erected.

In subsequent chapters every branch of radiology is dealt with by well-known American specialists. One chapter is devoted to the American pioneers in radiology, and is of great historical interest. *X*-ray physics, *x*-ray apparatus, and radiological diagnosis and treatment are all chapters of absorbing interest, and an excellent account is included of *x-ray* cinematography, due credit being given to Macintyre of Glasgow, who in the first volume of the *Archives of Skiagraphy* (April, 1897) published a paper on *x*-ray cinematography. He had previously, at a meeting of the Glasgow Philosophical Society, shown an *x*-ray cinematographic film of the movements of the leg of a frog, and it is interesting to remember that Macintyre described both the direct and the indirect methods of *x*-ray cinematography. Military roentgenology is an interesting chapter, and a fascinating story is told of the use of *x* rays in warfare.

The reader will find that in this book the history of radiology in all its branches is accurately given; and even the most recent developments in radiology, such as the nature of the cosmic rays and the Gurwitsch rays, find a place. Numerous references are given. The illustrations are of excellent quality, and a good index is provided. It is with confidence that we recommend this book to radiologists both young and old.

SYNOPSIS OF HYGIENE

The fourth edition of the well-known *Synopsis of Hygiene*,[5] by Professor JAMESON and Lieut.-Colonel PARKINSON, follows the third at an interval of less than four years. It amply sustains the merits of its predecessor, and adds new virtues besides. The work contains much fresh material, for which room is made without increase of bulk by the omission of the purely laboratory section on chemical methods. The order of subjects, which has been recast, gives priority to the more social topics. The opening section is concerned with health authorities and their powers, sanitary officers and their duties, and health propaganda. The specific fevers are next dealt with in turn, all information supplied being well up to date. Then follow articles on industrial disease, the animal parasites, and hospitals.

The section on the welfare services, which has been most usefully enlarged, includes the findings of the Maternal Mortality and Morbidity Committee, discusses the question of a national maternity service, and supplies detail enough, without over-elaboration, on maternity and child welfare schemes to convey a clear impression of the scope and character of the work. Under "schools" the problems of the mentally and the physically defective child are well presented. "Personal Hygiene," an excellent article, passes on to nutrition, family budgets, and the open-air life. Among other subjects treated are food, ventilation, and water supplies, the last including new methods of purification, such as catadyn sand. The essentials of sewage disposal and housing are set forth in an interesting way. The substantial section on sanitary law appears to omit no points of importance. Meteorology figures in an appendix along with a table of food values and a summary of physical and chemical factors.

The book makes ample provision for the needs of the student, and by means of its numerous references points the way to further progress. In 1930 we recommended the third edition to those preparing themselves for the Diploma in Public Health. We repeat that recommendation now in the case of the fourth with added cordiality.

[5] *A Synopsis of Hygiene.* By W. Wilson Jameson, M.D., F.R.C.P., D.P.H., Barrister-at-Law, and G. S. Parkinson, D.S.O., M.R.C.S., L.R.C.P., D.P.H., Lieut.-Colonel R.A.M.C.(ret.). Fourth edition. London: J. and A. Churchill, Ltd. 1934. (Pp. 619; 17 figures. 21s.)

THE NEWBORN

Dr. ERIC PRITCHARD has collected into book form the lectures on the care of newborn babies given during the past few years to students at Queen Charlotte's Hospital, and although the title-page of *The New-Born Baby*[6] states that it is a manual for midwives and maternity nurses, it should also prove useful for medical students and practitioners. There is a paucity of easily available information on this important age period, for, divided between textbooks on midwifery and on paediatrics, diseases of the newborn suffer from a sort of scattered responsibility. Such subjects as the premature infant, ophthalmia neonatorum, infections in the newborn, and the skin of the newborn are especially well described, while there is an excellent section on nursery fallacies, which exposes the foolishness of dummies, lime-water, lullabies, and domestic measures. On the artificial feeding of the newborn, however, this little book appears rather too complicated for the average maternity nurse. How the midwife, attending mothers in their homes, is to undertake the modification of cow's milk suggested, including the making of whey and a subsequent peptonization for three hours, is not explained. Some easier procedure should be advocated and explained. Nor does the section on constipation seem the wisest sort of teaching for the nursing profession, with six drugs described as of value in the course of the first page and training mentioned only on the second. The style throughout is clear and the teaching dogmatic, with many happy illustrations. Candidates for the C.M.B. should find the book of value, especially if the examiners could also be persuaded to read it.

Notes on Books

The second edition of Professor BECKMAN'S *Treatment in General Practice*[7] is a book for the use of medical practitioners. Every disease is given its separate heading, and the appropriate treatments, diets, and drugs are considered in detail. The volume contains a great deal of information, and is brightly and breezily written in a style that will no doubt find many admirers. It may be taken to represent current American practice, is furnished with a bibliography and an index, and can be cordially recommended to the readers for whom it is designed.

The volume of selected *Researches Published from the Wards and Laboratories of the London Hospital during 1933*[8] contains over thirty reprints of papers published in various medical, pathological, or physiological periodicals during the year. Most of them come from the wards, and their perusal gives the reader a clear impression of the skill and keenness with which the workers in that great institution make use of the opportunities for research with which they find themselves surrounded.

Dr. B. DE RUDDER'S work on The Acute Infectious Diseases of Civilization[9] contains, as its subtitle indicates, a discussion on the epidemiology and control of the commonest infectious diseases—such as measles, small-pox, whooping-cough, scarlet fever, diphtheria, and poliomyelitis. The work is divided into two parts. In the first the author discusses in turn the epidemiology and endemiology of the diseases named, the doctrine of latent spontaneous immunization, the influence of seasons and climate on infectious diseases, and their incidence and mortality in various countries; while in the second he deals

[6] *The New-Born Baby. A Manual for the Use of Midwives and Maternity Nurses.* London: H. Kimpton. 1934. (Pp. 272; 9 figures. 4s. 6d. net.)

[7] *Treatment in General Practice.* By Professor H. Beckman, M.D. Second edition. Philadelphia and London: W. B. Saunders Company. (Pp. 889. 45s. net.)

[8] London: H. K. Lewis and Co. Ltd. 1934. (7s. 6d. net.)

[9] *Die akuten Zivilisationsseuchen.* By Dr. B. de Rudder. Leipzig: Georg Thieme. 1934. (Pp. 286; 49 figures. M.16; bound, M.18.)

with notification and isolation, disinfection, return cases, the carrier problem, the serum prophylaxis of measles, whooping-cough and poliomyelitis, and active and passive immunization against diphtheria and scarlet fever. An appendix of mainly German and American literature is included.

The thirteenth issue of "The Year's Practical Medicine"[10] has been issued under the continuing editorship of Dr. CAMILLE LIAN, and contains an index for the last five years. The barbiturate controversy seems to have arisen in France, for three contributors deal with certain aspects of these drugs. The *x*-ray appearances in pneumonoconiosis are well reviewed, and the up-to-date nature of the production is illustrated by a good description of the basophil syndrome of pituitary dysfunction, and another of the Schuller-Christian syndrome. There is, however, still too much neglect of work done outside France.

There is no substitute for skilled personal instruction in the difficult task of teaching a sufferer from cleft palate to speak properly with what Nature, the surgeon, and the mechanic have between them given him for that purpose. But to those who cannot get the aid of a specialist in this teaching no better guide could be found than the monograph *Cleft Palate Speech*,[11] in which Miss VAN THAL gives detailed advice as to the necessary training of both mind and body.

[10] *L'Année Médicale Pratique*. Edited by Dr. Camille Lian. Thirteenth year. Paris: René Lépine. 1934. (Pp. 662; 6 figures. 26 fr.)
[11] London: Allen and Unwin, Ltd. 1934. (Pp. 94; illustrated. 3s. net.)

Preparations and Appliances

PYELO-LITHOTOMY FORCEPS

Mr. W. K. IRWIN, F.R.C.S. (London, W.), writes:

When removing calculi through an incision in the renal pelvis I had often found difficulty in manipulating the ordinary type of forceps, especially if the patient was stout, the pedicle short, and the kidney not readily mobilizable. I therefore designed a special instrument, which has been much used during the past six years. A new pattern, which is a material improvement, has now been made in accordance with my suggestions.

In the new model, shown in the accompanying illustration, the inner end, for grasping the calculus, is 1¾ inches long, is bent at a right angle to the handle, and has concave fenestrated jaws. The handle portion is 4½ inches in length. The whole instrument is stronger than in the first pattern. With such a forceps one can work in a much more limited space than with a straight or nearly straight type.

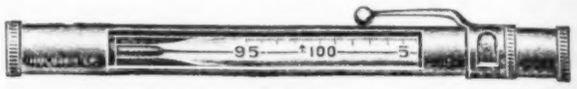
The instrument is obtainable from Messrs. Down Bros., St. Thomas's Street, S.E.1.

AN IMPROVED CLINICAL THERMOMETER CASE

Dr. B. RICHARDSON BILLINGS (Folkestone) writes:

Appalled at the "mortality" of clinical thermometers under average conditions, I have designed a case which protects a thermometer during the vulnerable periods of its career. Until clinical thermometers can be made so as to be absolutely indestructible, we must put up with breakage due to accidental dropping, though quite a number are broken in the thin case usually provided as a container. Moreover, these cases do not sterilize the thermometer.

The container I have devised is a strong metal tube longitudinally fenestrated, and lined with a pyrex glass tube (the strongest glass known), the ends of this lining being ground to a watertight fit against washers at each end. The lower end of this tube has a light compression spring-loaded ferrule, in which the bulb of the thermometer is held. The screw-cap at the other end presses the thermometer down into the tube and keeps it comfortably housed, in spirit or other antiseptic; a clip, of the fountain pen type, keeps the case snug in one's pocket. Thus the thermometer is kept safe, sterile, and ready to hand. Risk of damage through undue pressure being applied (as, for instance, when leaned upon while in the waistcoat pocket) is minimized. In the rare contingency of the glass liner becoming damaged, this can easily be replaced at a cost far below that of a new thermometer. Owing to atmospheric



pressure, when the thermometer has been extracted and the case laid on its side, the fluid does not run out.

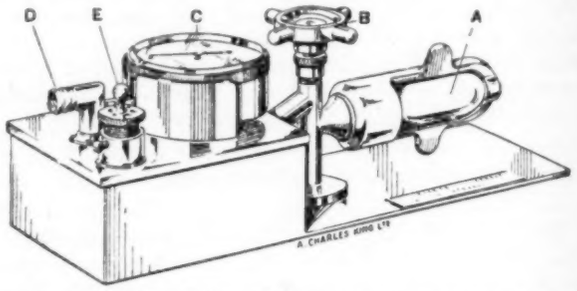
The Holborn Surgical Instrument Co., Ltd., 26, Thavies Inn, E.C.1, have ably carried out my design, and are prepared to sell these containers at five shillings each, spare barrels being sixpence.

TESTING PATENCY OF FALLOPIAN TUBES

Mr. F. NEON REYNOLDS, F.R.C.S. (London, W.), writes:

The apparatus shown is for the investigation of the patency of the Fallopian tubes.

The illustration needs no lengthy explanation. A is a CO_2 sparklet bulb; B, a needle valve control; C, a manometer; D, the connexion for rubber tubing leading to the uterine



cannula; and E is a relief valve, which can be set to "go off" at any desired pressure. This relief valve is a safeguard in that it prevents the pressure rising to a dangerous degree should the supply valve be opened too fully and suddenly by any inexperienced assistant.

The main advantage of the apparatus, however, and the one for which it was designed, lies in its size. It measures 8¾ by 3¼ by 3 inches, and can be carried easily in one's ordinary instrument bag. Those who prefer to use CO_2 instead of air can thus be relieved of carrying an extra and somewhat bulky addition to their ordinary impedimenta.

The apparatus is made by Messrs. A. Charles King, Ltd., 34, Devonshire Street, W.1.

A RADON SEED INTRODUCER

Dr. SYLVIA B. WIGODER (National Radium Centre, Bristol Royal Infirmary) writes:

The accompanying illustration shows an instrument I designed some little while ago. Experience has proved it of great assistance, and I should like to mention some of its advantages.

The instrument is quite simple in construction. It is loaded at the point, a slit carrying the silk to prevent cutting, while a little vaseline makes it possible to use all sizes of seeds.

One hand only is required to use the instrument, the other being free to steady the growth. The curve has made the introducer adaptable for almost any situation. By having the silks of equal lengths it is, of course, easy to determine the depths the seeds are inserted by the portion remaining above the growth.

I have to thank Messrs. Allen and Hanburys for the manufacture of the instrument, and for the great care they have taken in following my instructions.

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TUBERCULOSIS AND THE MILK SUPPLY

On November 2nd, 1932, the Prime Minister appointed a committee of the Economic Advisory Council with the following terms of reference: "To consider what practical measures can be taken to secure a reduction of disease among milch cattle in this country, and to report upon any changes desirable in the existing administrative practice, and, in particular, upon the value and practicability of methods for reducing the incidence of bovine tuberculosis and improving the milk supply." The Committee, with Sir Frederick Gowland Hopkins in the chair, after receiving evidence from numerous sources, has at last published its eagerly awaited report.[1] Though the report itself contains a wealth of information on the frequency of disease in cattle and of milk-borne disease in man, on the nutritive value of milk, and on the effect of pasteurization on the individual constituents of milk, as well as a critical summary of existing legislation, it is on its proposed recommendations for improving the present position that interest must be chiefly centred. Before considering these in detail, it must be pointed out that the Committee has restricted itself almost entirely to bovine tuberculosis and its effect on the milk supply. It has left, at any rate temporarily, the problem of eradicating contagious abortion, mastitis, and Johne's disease to the initiative of the farmer, and it has not squarely faced the problem of milk-borne disease, which would still exist even if tuberculosis was eradicated.

The three main lines of recommended administrative development may be summarized as follows: (1) An extension of routine veterinary inspection. It is proposed that veterinary inspection should be made obligatory on all local authorities, and that a veterinary service should be built up consisting largely of whole-time officers with a training in veterinary State medicine. (2) An active policy for the eradication of bovine tuberculosis. It is realized that the Tuberculosis Order, 1925, has done nothing to reduce the incidence of tuberculosis in cattle, and that the only sound method for combating this disease is the building up of tuberculosis-free herds. To achieve this end a scheme is outlined, and various inducements are held out to owners to secure their co-operation in it. A list of tuberculosis-free herds (accepted herds) is to be instituted, together with a list of herds whose owners are making bona fide efforts under official control to free them of tuberculosis (supervised herds). Free veterinary advice and free tuberculin testing are to be provided, financial help where necessary is to be forthcoming, and a higher price is to be paid for milk from tuberculosis-free herds by means of a levy on other types of milk. (3) Regulations governing the grading of milk and the granting to large urban authorities of the right to require pasteurization of milk other than that produced by herds free from tuberculosis.

The third recommendation involves far-reaching proposals. In the first place it is maintained that all liquid milk for human consumption should be sold under an official designation, and that all such milk, whether to be consumed in the raw or pasteurized state, must attain a certain standard of cleanliness on the farm. Four grades of milk are suggested: (*a*) *certified milk*, derived from tuberculosis-free herds, to be sold raw, with no necessity, as at present, for bottling to be performed on the farm; (*b*) *pasteurized milk*—namely, milk which has been heated once in a licensed plant by a process approved by the Ministry of Health or the Department of Health for Scotland; (*c*) *sterilized milk*—namely, milk which has been raised to the boiling point or higher in a plant licensed for the purpose; (*d*) *milk* (*uncertified*)—namely, milk which has undergone no form of heat treatment, which is not derived from tuberculosis-free herds, but which attains a certain hygienic standard. In the second place it is laid down that the council of any county borough, municipal borough, large burgh, or urban district in an area the population of which exceeds 100,000, and the London County Council, shall have the right to prohibit the sale of milk (uncertified) within five years of initiation of the tuberculosis eradication scheme, provided it has given not less than two years' notice of its intention to do so.

These recommendations are framed in an endeavour to achieve the maximum gain in public health with the infliction of the least hardship on the producer-retailers in the large towns. It is contended that the immediate institution of compulsory pasteurization in large towns would deprive a large number of farmers, who produce and sell their own milk on the outskirts, of their present means of livelihood. The proposal, therefore, is to offer these producer-retailers the alternative of pasteurizing their milk or of freeing their herds from tuberculosis within five years. So far as small towns and country districts are concerned, where compulsory pasteurization is at present impracticable, reliance is to be placed on increasing the supply of milk from tuberculosis-free herds and on educating the public to boil all milk which is not of certified standard. If the recommendations in this report are fully implemented, they will undoubtedly go some way towards safeguarding the public health—at any rate in the large towns. Whether they will be successful in leading to a reduction of tuberculosis in cattle is another question. In the long run an adequate economic stimulus for building up tuberculosis-free herds must depend on a demand for milk from this type of herd. But where is this demand to come from? It is known that raw milk from tuberculin-tested herds is not free from the risk of carrying other diseases, and it is difficult to imagine how any medical

[1] Cmd. 4581. Economic Advisory Council Committee on Cattle Diseases Report, May, 1934. H.M. Stationery Office. (2s. 6d. net.)

adviser, aware of this fact, is going to recommend in large towns, where a choice is available, the consumption of raw potentially dangerous certified milk at a higher price in preference to pasteurized safe milk of Grade A standard at a lower price. The objection felt by some people at present to pasteurized milk—namely, that, even though safe, it is often produced under uncleanly conditions and is aesthetically undesirable—will no longer hold good, because a pre-pasteurization standard of cleanliness is to be enforced.

It is, however, premature to discuss the possible outcome of this report until it is known how far the Government proposes to adopt the Committee's recommendations. That it calls for a substantial advance in public health legislation is very gratifying, and that it represents a determined effort to improve the cleanliness and safety of the milk supply is a matter for especial congratulation. While we cannot go all the way with the distinguished botanist "F. K.," who writes on this subject so eloquently in *Nature* of June 2nd, we echo his plea that "a great national effort must be made to discover means of securing to the people, all the year round, plentiful supplies of the best milk that Nature and art can produce."

THE BRITISH HEALTH INSURANCE SYSTEM

Some incorrect impressions of British national health insurance have found their way across the Atlantic, and to put the matter in a truer perspective for American readers Sir Henry Brackenbury has contributed an article to the *New England Journal of Medicine*. He finds no difficulty in proving that on the results of twenty-one years' administration there has been marked benefit both to the insured community and to the medical profession working under the Acts. He points to the resolution which the Representative Body of the British Medical Association passed eight years ago, almost without dissent, affirming that the measure of success attending the experiment had been sufficient to justify the profession in uniting to secure its continuance and improvement, and also to the memorandum of evidence presented by the British Medical Association to the Royal Commission, in which eight specific advantages are enumerated.

No one can say to what extent the national health insurance system has been responsible for the marked improvement in national health during the last two decades, notwithstanding war and economic calamities. The effects of insurance cannot be separated from other agencies, such as an increase in the knowledge of medicine and ancillary sciences, more effective public health administration, and popular education in hygiene; but the beneficial result of all these agencies must have been largely augmented by the activities of the insurance practitioner. To the medical profession itself national health insurance has brought advantages. Practitioners are learning to be colleagues rather than rivals; family practice and the various branches of the public health service are being brought into better relationship. Many practitioners have found it a relief to be able to give a fuller attention to their poorer patients without the feeling that they will be distressed afterwards by the presentation of a bill. Large numbers of general practitioners in poor areas would have found it difficult to-day, without the insurance system, to earn by the exercise of their profession sufficient income on which to live. Sir Henry Brackenbury is careful to add that the money coming to them through these arrangements has been fully earned; it is the greatly increased amount of work which has led to this financial improvement, and notwithstanding the increase in quantity of service, there is no evidence of any deterioration in quality.

Certain drawbacks undoubtedly there are. The multiplicity of rules and regulations is often mentioned, but this arises from three valuable features in the system: the right of every member of the medical profession to enter the service; the close approximation of its conditions to those obtaining in private practice; and the considerable share assigned to the profession itself in the administration. The very confidence shown in the profession which these features disclose necessitates provision to deal with occasional negligence or delinquency and to safeguard the service from any untoward consequences of this freedom. Sir Henry Brackenbury admits that there is a tendency to multiply and complicate rules unnecessarily, but in general it may be said that they do not trouble the practitioner much more than the ordinary requirements of the penal code trouble the law-abiding citizen. Two other points of some importance are mentioned. The more easily transferable character of insurance practice facilitates the procedures of commercially minded practitioners and the exploitation of the profession by ingenious laymen. Again, with a small proportion of insured persons there is a tendency to demand the doctor's services as a business right and to be critical and suspicious lest they should not secure their full due. But the majority of insured persons enter into relations with their practitioners in the right spirit.

If as a result of British experience advice were offered elsewhere Sir Henry Brackenbury would lay it down, first of all, that the three unusual features of the British scheme already mentioned should be regarded as fundamental—namely, (1) the right of all doctors to be members of the service, (2) the absence of interference between doctor and patient as such, and (3) the appropriate association of the profession with the administration of the scheme. To these he would add three others, which will not be unfamiliar to readers of the *British Medical Journal*: that medical advice and treatment must be separated as completely as possible from any insurance provision for cash payments; that the scheme from the beginning should make provision not only for a general practitioner service, but also for consultant, specialist, and other ancillary services, and if possible institutional treatment; and that the administration

should be as simple as possible, in topographical areas, and not through a multiplicity of approved societies. In Great Britain, owing to interests already established, it has been recognized that approved societies may need to be represented on whatever local committees administer the scheme. In the Proposals for a General Medical Service for the Nation, issued by the British Medical Association in 1930, an extension of the scheme to dependants is urged, also the inclusion of specialist service and hospital care. Financial stringency has prevented any attempt to establish such provision during the past three years, but the scheme has been very favourably received, and if Sir Henry Brackenbury had written a little later he would no doubt have added that a conference of bodies interested in the subject is projected for the not distant future.

WORK OF THE G.M.C.

The General Medical Council completed the business of its summer session in five days, but only by putting in several hours of "overtime." Its work consisted almost entirely of the consideration of charges against practitioners, but although fourteen medical men came before the Council on charges of varying gravity, only three erasures were made. Of the three, two followed convictions for serious offences, and the third followed upon the proof of professional relationship between the respondent and co-respondent in divorce proceedings. In three cases in which there had been convictions for drunkenness or cognate offences the facts were found proved, but judgement was suspended until a later session. In one of these in which the practitioner had on a previous occasion been before the Council following a similar offence, and had broken the promise he then gave, the Council took the unusual course of postponing judgement for as long as two years, and required the practitioner to report at the end of the first year. Two cases of alleged canvassing were investigated, and one of them dismissed. In the other, certain facts were found proved, and judgement was postponed. These cases are the most tedious which the Council has to try, for they are usually brought by other doctors in the neighbourhood, whose evidence must be closely tested, and the story has to be pieced together from a number of witnesses the value of whose individual testimony may only be slight. A case which aroused comment in the Press concerned a neurological physician of high repute who had given an interview to a responsible Sunday newspaper, stating his view that barbitone compounds were most valuable and satisfactory hypnotics, and that so far as any addiction was concerned this did not develop out of their medical administration but nearly always arose from repeated personal attempts to counteract depression and insomnia. There are many experienced members of the profession who share this opinion and welcome its public ventilation by a well-known teacher. Exception was taken to a laudatory description of the specialist by the journalist. The Council thought the article "unwise," but accepted Dr. Collier's assurance that his motive was not, as alleged in the charge, to promote his own professional advantage. Here the complainant was a layman with a grievance; and if the Council had declined to consider the case at all we should no doubt have heard it said in some quarters: "The G.M.C. has one law for the poor G.P. and another for Wimpole Street." Another case arose out of a complaint against an insurance practitioner, and was reported to the Council by the Minister of Health, who, however, was not represented at the inquiry. This practitioner, so the allegation ran, had falsely represented to his insurance committee that he had been paid certain sums by four insured patients for special treatment, which he thought, wrongly, to be outside the terms of service, whereas in fact he had received from them larger sums (in one of the cases much larger). The medical services subcommittee had found that the doctor afforded certain services and received fees therefor in addition to those notified by him to the committee, and failed to notify such additional services and fees. He was severely censured by the insurance committee; representations were made for a deduction from his remuneration—actually £15 was deducted—and he was ordered to refund the amounts he had charged, but no recommendation was made for the removal of his name from the list, though the Ministry reported the case to the General Medical Council, to whom the only penalty open is the larger one of erasure from the *Medical Register*. The evidence brought before the Council, however, came down to the evidence of only one of the four patients, who himself was too ill to give very clear testimony. On the other hand, the practitioner was able to bring forward evidence—that of his dispenser—which, through a misunderstanding, was not given at the medical services subcommittee hearing, and which bore out his own statement that these additional payments were not in fact received by him. He had not appealed, believing that the monetary penalty finished the case. The Council found the facts not proved, and the case was dismissed. The Council took the unusual course of reversing the findings of the Dental Board in two cases in which the Board had recommended that dentists should be struck off for alleged contraventions of professional ethics, in one case for circularizing former patients of the practice, and in the other for instituting a clinic for poor persons and inducing local medical practitioners to make the clinic known. It is rare—though it has happened at least once before—for the Council to upset the finding of the Dental Board. The Council, like the court of appeal in criminal cases, does not rehear the evidence, but has to accept the facts as found by the Dental Board.

THE BIRTHDAY HONOURS

The list of medical honours announced on the occasion of His Majesty's sixty-ninth birthday will be found at page 1042. Sir Milsom Rees, who has held the appointment of laryngologist to Their Majesties since the King's accession in 1910, is promoted to be G.C.V.O. Dr. Ambrose Thomas Stanton, who for the past eight years has been chief medical adviser to the Secretary of State for the Colonies, is promoted to be K.C.M.G. Dr. Maurice Alan Cassidy, physician-extraordinary to the King and senior physician to St. Thomas's Hospital, is created K.C.V.O. Dr. Frederick Grant Banting, Nobel prizeman, was appointed in 1923 professor of medical research at the University of Toronto in recogni-

tion of his large part in the discovery of insulin, and now becomes K.B.E. The honour of knight bachelor is to be conferred on five members of the medical profession. Major Robert George Archibald, R.A.M.C. (ret.), has been director of the Wellcome Tropical Research Laboratories at Khartum since 1920. Mr. Comyns Berkeley, consulting obstetric and gynaecological surgeon to the Middlesex Hospital, is vice-chairman of the National Radium Commission, and director of the L.C.C. Radium Centre at Hampstead. Professor Grafton Elliot Smith, F.R.S., famous in the world of anthropology and Egyptology, has for many years held the chair of anatomy at University College in the University of London. Major-General James Drummond Graham lately relinquished the post of public health commissioner with the Government of India, and was for a time officiating Director-General of the Indian Medical Service. Rai Bahadur Upendra Nath Brahmachari is a well-known civilian practitioner in Bengal. Our readers generally will welcome these rewards for distinguished service in varied fields of medical practice, research, and administration, while members of the Metropolitan Counties Branch of the British Medical Association, of which he has been treasurer and president, will note with particular pleasure the honour bestowed on Mr. Comyns Berkeley. In the list of those upon whom a knighthood is to be conferred there appear also the names of two men having close links with medicine: Captain Ian Fraser, M.P., chairman of St. Dunstan's, whose services on behalf of the blind are appreciated far and wide ; and Mr. Samuel Brighouse, for many years coroner for South-West Lancashire, and still active at the age of 84. Miss Lloyd Still, matron of St. Thomas's Hospital, receives the honour of D.B.E. during her presidency of the International Council of Nurses.

TREATMENT OF SPRAIN

Just four years ago Leriche drew attention to the rich sensory innervation of the articular ligaments, and later he came to the conclusion that irritation of these nerve endings is an important factor in the disability that so often follows the common sprain. In his opinion the actual lesion in this condition is not a gross rupture of the ligaments or capsule, but rather a molecular disturbance of the white fibrous tissue. This led to vasomotor disturbances, oedema, and irritation of the sensory nerve endings. These findings led Leriche and Fontaine to try the effect of intraligamentous injections of novocain in cases of sprain, and they found that pain and limitation of movement, in fact all disability, disappeared immediately after the first injection, though in some cases in which symptoms recurred it was found necessary to repeat the injections on the second and third days. Two recent communications from other observers contain reports of cases similarly treated and with equally favourable results.[1] Although it may be true that macroscopic lesions—tearing of fibrous tissue and extravasation of blood—are absent in some very mild joint injuries, it must be borne in mind that "sprain" is a clinical term that covers almost all the minor injuries of joints short of gross ligamentous rupture, subluxation, dislocation, and fracture. The whole group of injuries forms a continuous crescendo rather than a series of disconnected conditions. From the practical point of view, therefore, Leriche's conception of sprain is of doubtful value, seeing that there is no way of distinguishing clinically between his mild cases of "molecular" sprain and those common injuries in which partial rupture of ligaments and haemorrhage undoubtedly take place. Localized tenderness and swelling are present in both. Practitioners in this country have been brought up to believe that rest to the damaged part, followed by graduated exercise, is as necessary in the treatment of sprain as in any other type of injury, and there is no doubt that the Hiltonian treatment properly applied is very effective in most cases. Apparently, however, Leriche and his followers prefer the intraligamentous injection of novocain. The injection must certainly relieve the pain ; yet it is difficult to suppose that it has any beneficial action on the injured ligament. Nevertheless, the results reported are most striking, particularly in cases of trauma to the shoulder, where rest followed by graduated exercise too often fails to alleviate the pain and stiffness that are such a troublesome feature in this particular injury. Though the rationale of Leriche's method of treatment may be obscure, it merits wide clinical trial. It is simple and apparently effective.

[1] Arnulf, G., and Frieh, Ph.: *Presse Méd.*, April 14th, 1934, p. 597 ; Courboules, Mandillon, and Georget: *Gaz. Hebd. des Sci. Méd. de Bordeaux*, February 25th, 1934, p. 122.

SUDDEN DEATHS OF SWIMMERS

There are few deaths so mysteriously tragic as that of the apparently robust and practised swimmer who suddenly sinks like a stone. Dr. A. Ravina and Dr. Simone Lyon[1] have lately tried to disentangle the conflicting theories advanced from time to time to explain this manner of death, and they devote particular attention to the work of Dr. Verhoogen.[2] His explanation assumes the existence of anaphylactic sensitiveness to thermal impressions. It may be congenital and hereditary, but generally it is acquired. The anaphylactic shock caused by cold water induces rapid vasomotor paralysis and general muscular impotence. Verhoogen records the case of a man who nearly died while bathing in a mountain lake, and who for several years had been subject to attacks of urticaria, shivering, and general debility when his skin came into contact with cold water. In Verhoogen's opinion this condition is by no means rare, and he recognizes it in those cases of pruritus and urticaria for which bathers commonly give jelly-fish the blame. According to another school, associated with the name of de Gurbert, the sudden collapse of the swimmer is due to an upset of his digestive mechanism, and occurs during the first two or three hours after a meal, when the food is still so inadequately digested that, under the influence of cold, it acts as a foreign protein whose sudden absorption by the circulation has disastrous effects—anaphylactic shock, of a kind. On this view, the risk of sudden death is less immediately after a meal, when the food is still insufficiently digested to be absorbed too quickly. According to a third theory, that of Frommel, most of these sudden deaths are the result of the sudden action of cold water on the nasal mucosa. The nasal branch of the trigeminal nerve is supposed to be responsible for a triple reflex provoking respiratory

[1] *La Presse Médicale*, December 6th, 1933.
[2] *British Medical Journal*, November 18th, 1933, *Epitome*, para. 347.

inhibition with transitory arrest of the movements of the lungs, cardiac inhibition with bradycardia, and a rise of the systolic with a fall of the diastolic blood pressure. The trigeminal may also be held responsible for those cases in which a "header" from a good height brings one ear in painful contact with the water, or the swimmer goes to such a depth that pressure on the tympanum becomes great. The theory attaching special importance to disturbances of the semicircular canals may explain the inability to co-ordinate his movements from which the bather suddenly suffers, but not his complete collapse. Dr. Ravina and Dr. Lyon find that Verhoogen's theory has the merit of offering prophylactic and therapeutic remedies. If it should prove correct, and if all bathers were medically examined, the potential victims of these drowning accidents could be detected and advised not to venture into cold water. For a lump of ice or a compress soaked in ether applied to the forearm for a couple of minutes would, it is suggested, raise a papular rash in a quarter of an hour, betraying this form of idiosyncrasy.

THE "ACH" INDEX OF NUTRITION

The search for some method of picking out undernourished children from big groups by a simple test or tests continues, and the latest index to be suggested has the backing of the American Child Health Association. In a new pamphlet[1] by Drs. Raymond Franzen and George T. Palmer, and in an article[2] by the former author, the details and value of the "ACH index" are set out and discussed. The letters stand for "arm," "chest," and "hip," and the aim of the index is the aim of other indices—namely, to identify children with small amounts of musculature and subcutaneous fat in relation to body build. It is well known that ordinary weight-for-height-and-age tables are liable to miss children with big frames and to include well-covered children with light frames. The starting-point of the new index was an investigation of over ten thousand children of varying social and economic status, scattered over seventy-five cities in the United States of America. A medical examination was combined with a complete set of measurements—shoulder breadth, hip width, chest width and depth, height, weight, arm and calf girth, size of deltoid, and thickness of the subcutaneous tissue over different areas of the arms and legs. A very thorough analysis was made of this material, and all sorts of combinations of measurements were tried. Some were found to yield no additional information to that given by other measurements, and they were discarded. Finally, the matter was narrowed down to a measurement of arm girth, chest depth, and hip width. Two instruments are needed—a steel tape and wooden callipers. The children are instructed to remove heavy clothing and empty their pockets. The upper arm is bared and only thin layers of clothing cover the chest. The girth of the upper arm is measured, first, with the arm flexed, at the highest point of the biceps, and, secondly, with the arm relaxed. The sum of the two measurements is called the "arm girth." Next the chest depth is measured with callipers placed just below the angle of the left scapula, and, with the base of the callipers at right angles to the long axis of the chest, the other arm touches in front just above the nipple line. The measurements are taken at the end of inspiration and at the end of expiration with ordinary quiet breathing. The sum of these two readings is recorded as "chest depth." The "hip width" is next measured, and represents the distance between the most lateral parts of the great trochanters. The calculations now necessary consist in subtracting the sum of the two chest depth readings from the sum of the two arm girth readings. This is then compared in a table with the minimum difference allowed for each hip width. If the child is undernourished the difference will be less than that allowed in the tables. Tables for use with boys and girls between 7 and 12 years of age have been prepared. A higher rating can be used to pick out a larger number of cases for more detailed examination, but for general purposes the method and tables here described are recommended. A very thorough test of the "ACH index" was made for a group of 500 children aged 11 years, half boys and half girls. Out of this group, with the most extensive criteria available, forty-three children were selected as undernourished. Of these the "ACH index" picked out forty-one, as compared with sixteen by the ordinary weight-for-height method and twenty-seven with weight-for-height-and-width-of-hips. Rating by a medical examiner appears only to have detected five out of nineteen boys in the test, the rating for girls not being available. It is claimed that the method is very economical in time.

[1] *The ACH Index of Nutritional Status.* American Child Health Association, 450, Seventh Avenue, New York City. (10 cents.)
[2] *Amer. Journ. Dis. Child.*, April, 1934, p. 789.

PRESCRIPTION OF THYROID: DANGER OF OVERDOSAGE

In a recent letter the Wholesale Drug Trade Association calls attention to an increased demand for 5-grain tablets of thyroid extract. Several firms, especially in the North of England, are now manufacturing twenty times as many of these 5-grain tablets of tab. thyroideum *B.P.* as they did before. It is thought that many practitioners are in the habit of inadvertently prescribing tab. thyroid. *B.P.* when they mean to order the considerably less potent *fresh* gland tablets. In support of this contention it is pointed out that several complaints have been received from doctors and chemists of untoward effects following the use of 5-grain thyroid tablets, and that on inquiry it has been found that the doctor had actually intended fresh gland to be used. The dose of the 1932 *B.P.* preparation "thyroideum" (synonyms: "thyroideum siccum," "dry thyroid," "thyroid extract," "thyroid gland") is given as 1/2 to 5 grains, and it should be realized that this preparation is five times as strong as the fresh gland preparation. The table of corresponding doses is given below:

Tab. Thyroid. Gland (Fresh).	Thyroid. Sicc. (*B.P.*)
1/2 grain	1/10 grain
1 ,,	1/5 ,,
2 grains	2/5 ,,
3 ,,	3/5 ,,
5 ,,	1 ,,

It seems opportune here to emphasize that when "thyroid tablets" are ordered fresh gland cannot legally be supplied. Consequently, unless fresh gland extract is specifically asked for there is a danger, almost a certainty, of the stronger extract being pro-

vided. In this connexion it is of interest to note that Martindale's *Extra Pharmacopoeia*, 1932 edition, states, under the heading of Standardized Thyroid Tablets: "We discard the old fresh substance basis for thyroid tablets as being unscientific and misleading. H. W. Paines repeats our advice . . . to prescribe [the drug] as thyroideum siccum."

JOHN KEATS'S ANATOMICAL AND PHYSIOLOGICAL NOTEBOOK

Every medical lover of Keats's poetry knows that he was a dresser at Guy's Hospital, that he qualified at the Apothecaries' Hall on July 25th, 1816, and that he actually practised for a short time. The little notebook in which he jotted down the substance of some of the lectures he heard as a student had long been known and, thanks to Sir William Hale-White, it was reproduced photographically.[1] Mr. M. N. Forman has done well to print the notes, even though in an edition of only 350 copies. He would have done still better could he have issued the whole book in facsimile, for the single page he reproduces makes one hunger for more. The notes in themselves are of small interest, for they only represent the anatomical and physiological teaching of the early nineteenth century. The value of the notebook lies in the delight it gives of seeing the script of one who wrote: "The other day during the lecture there came a sunbeam into the room and with it a whole troup of creatures floating in the ray, and I was off with them to Oberon and fairyland." "My last operation," he once wrote to Charles A. Brown, "was the opening of a man's temporal artery. I did it with the utmost nicety but, reflecting on what passed through my mind at the time, it seemed a miracle, and I never took up the lancet again." Mr. Forman introduces the book with a short preface and a list of the persons to whom Keats refers. The "Mr. Grosvenor of Oxford" was John Grosvenor (1770–1817), a pioneer in massage, a founder of the Radcliffe Infirmary, where he was one of the earliest surgeons, and the proprietor and editor of *Jackson's Oxford Journal*. Dr. Gibson gives an excellent account of him in his *History of the Radcliffe Infirmary*.

THE JOURNAL OF THE A.P.I.M.

The May number of *Revue Internationale* of the Association Professionnelle Internationale des Médecins contains matter of great interest and importance, including the questionaries and answers on "the different legislations as regards accident insurance" and on "the legal and professional position of opticians." Full information on these subjects has been received from seventeen European countries. In a preliminary "Causerie professionnelle" the general secretary of the A.P.I.M., Dr. Fernand Decourt, takes up the question of "Abuse in sickness insurance," and, after dealing with the various allegations made as to the responsibility of the medical profession in this matter, which are "common form" in every country, he expresses the opinion that there are two reforms which, if adopted, might greatly lessen the claims for insured persons upon the funds of their societies. The first is that steps should be taken to give the insured person a prospect of some pecuniary individual share in the financial benefit which would result from suppression of abuse. He is of opinion that if the insured person thought that he would have an individual claim on economies made, he would become a jealous defender of the prosperity of his society. Dr. Decourt quotes as evidence of this good result the existence of certain societies already making use of this method, which seems not unlike that adopted in this country by the Hearts of Oak Benefit Society. The second reform suggested by Dr. Decourt is that the insured person should participate in the expenses of the drugs and dressings supplied to him. This has already been done in one or two countries with considerable advantage, and those who are interested in this subject would do well to read what Dr. Decourt has to say about it. In addition, there are letters from the correspondents in Austria, Holland, and Poland, containing much interesting information as to the professional position in these countries.

[1] Printed from the Holograph in the Keats Museum, Hampstead. Edited by Morris Nuxton Forman. London: H. Milford, Oxford University Press. (12s. 6d. net.)

SUMMARIES

Sir Clifford Allbutt, in his *Notes on the Composition of Scientific Papers*, gave the following advice: "On the completion of a long thesis or important scientific essay it is well to draw up a syllabus of the argument and to place it at the beginning; in any case let the conclusions be resumed succinctly at the end; it is not for the author to compel the reader to peruse his essay." Developing this point on rather more technical lines, Drs. George H. Simmons and Morris Fishbein wrote in their *Art and Practice of Medical Writing*: "The summary—a brief abstract of the article—may appear at the beginning or at the close. Not every article should be summarized. Those of more than average length (more than 1,500 words), those which involve much description of detail and technic, and those which aim at a complete survey of literature on the particular subject demand a summary. A brief digest of a long article in the introductory paragraph often will stimulate some to read the article who otherwise would not." Our object in making these quotations, as might be supposed, is to remind medical authors once again that every MS. except the shortest should be regarded as incomplete without a concise summary. Having quoted so much we may end with another extract. In her little book, *The Writing of Medical Papers*, Mrs. Maud Mellish-Wilson (whose death a few months ago is deplored far beyond the Mayo Clinic) advised contributors to scientific journals to wind up their articles with "a brief review of the work done and of the conclusions which may properly be drawn therefrom. The writer should have in mind that this portion of the paper is usually not only the first portion read, but that it may be the only portion read. Further, if properly made, the summary and conclusions may serve as a most desirable form of abstract to be published by other journals."

On the evening of Friday, June 29th, at the London School of Hygiene and Tropical Medicine (incorporating the Ross Institute), the Earl of Athlone, Chancellor of the University of London, will perform a ceremony in honour of the memories of Patrick Manson and Ronald Ross.

FIG. 1.—Oesophagus and stomach.

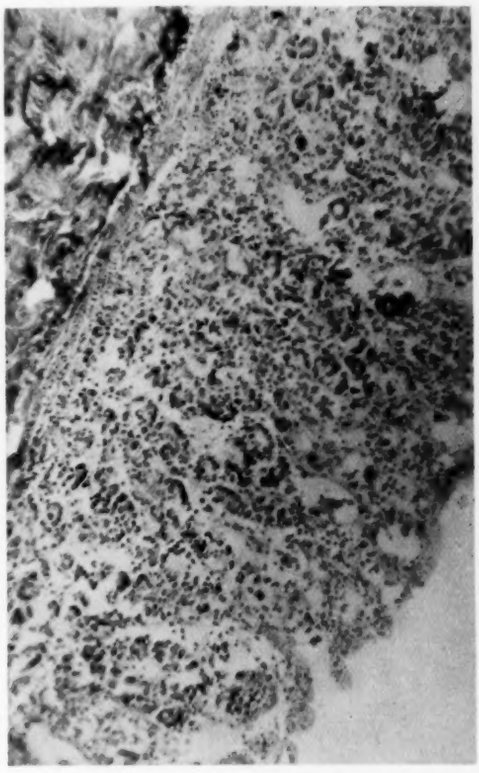

FIG. 2.—Section of cardiac end of stomach.

FIG. 3.—Section of kidney.

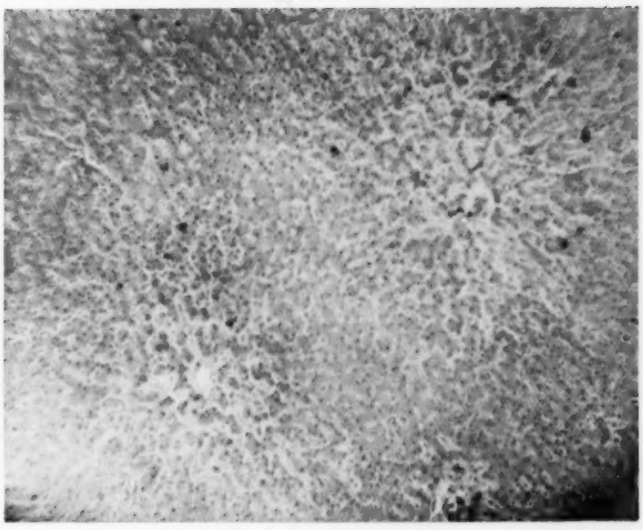

FIG. 4.—Section of liver.

FIG. 1.—Right lung. Upper lobe: with emphysema and extension of miliary tubercles. Lower lobe: large carcinoma metastasis surrounded by recently liquefied tuberculous round foci. Thickening of pleura over right lower lobe.

FIG. 2.—Miliary tuberculosis. Right lung crowded with miliary tubercles. Left lung collapsed by recent and old pleurisy. Very few tubercles.

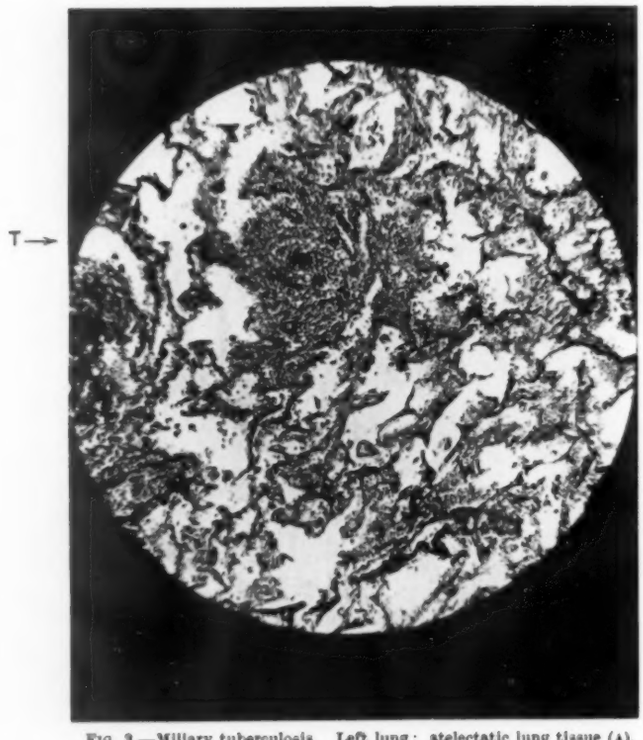

FIG. 3.—Miliary tuberculosis. Left lung: atelectatic lung tissue (A). Only one tubercle (T), without caseation and tubercle bacilli, consisting only of epithelioid, and giant cells.

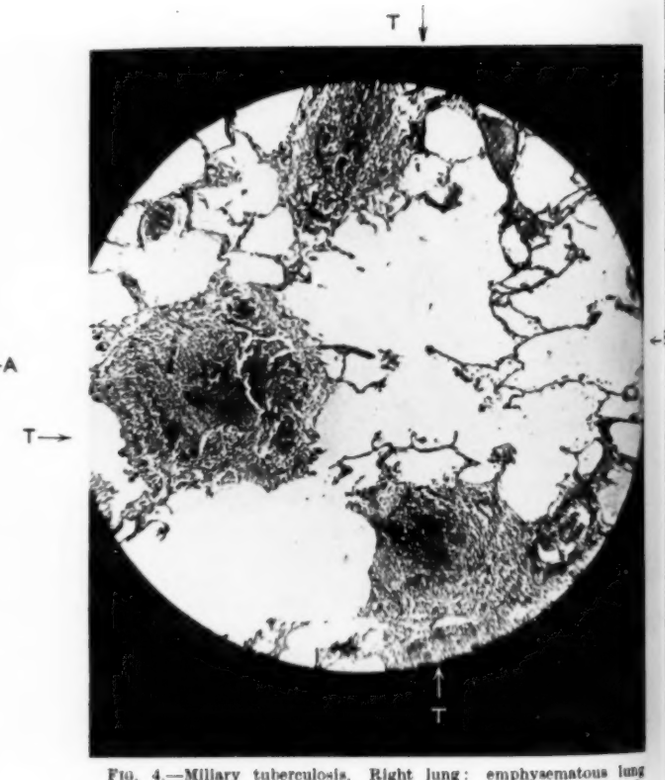

FIG. 4.—Miliary tuberculosis. Right lung: emphysematous lung tissue (E). Numerous tubercles (T) with caseation and many tubercle bacilli.

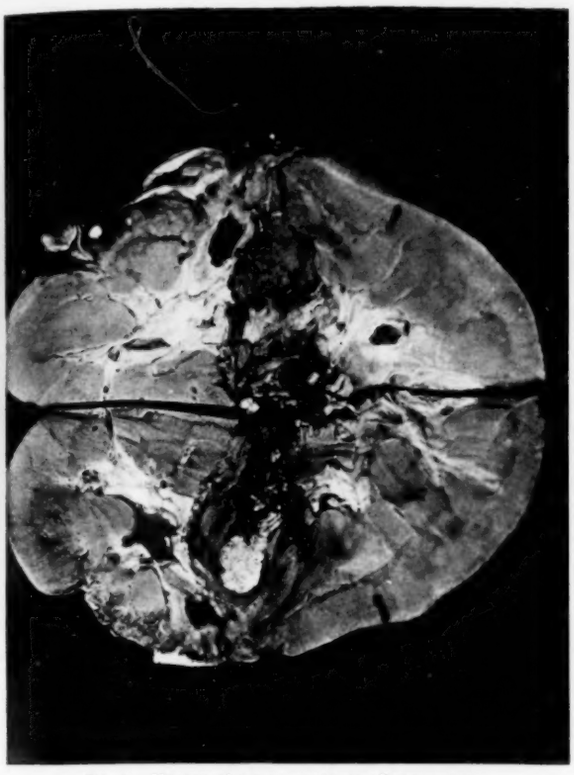

FIG. 1.—Hypernephroma: specimen after removal.

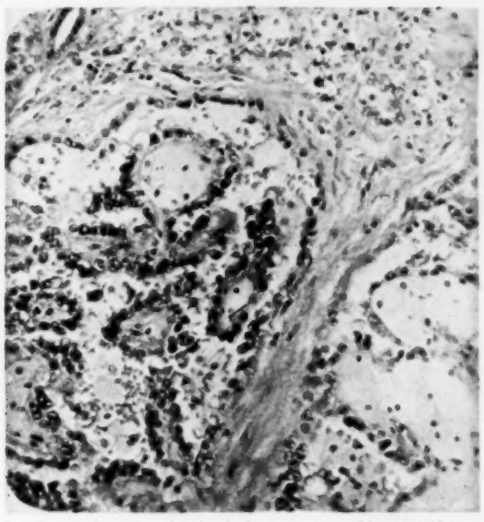

FIG. 2.—Section showing typical appearance of hypernephroma.

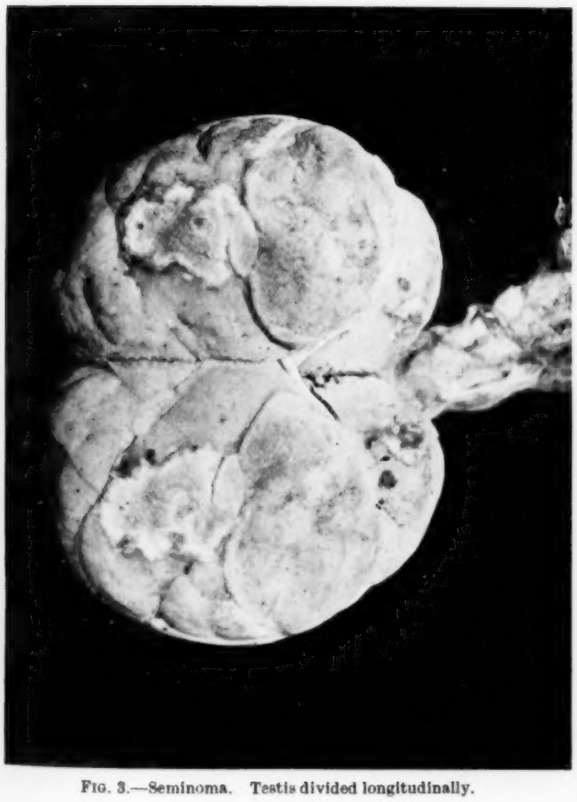

FIG. 3.—Seminoma. Testis divided longitudinally.

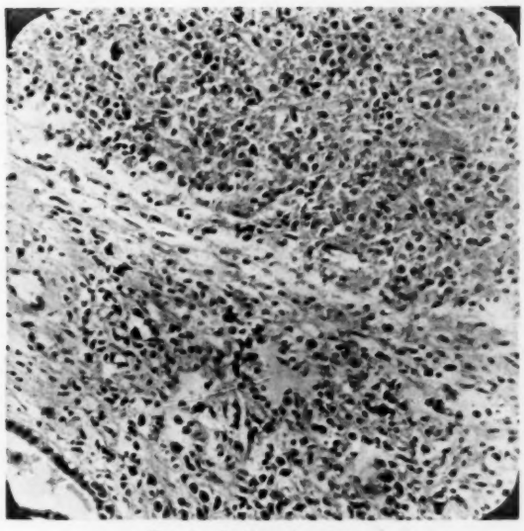

FIG. 4.—Section of seminoma.

WILLIAM EVERETT: GIANT RENAL CALCULUS

Bilateral calculous pyonephrosis, with giant calculus in right kidney.

JOHN F. HACKWOOD: COMPLETE CONGENITAL DIAPHRAGMATIC HERNIA IN AN ADULT—OPERATION

Showing coils of small intestine in upper half of left chest.

J. V. SPARKS AND C. N. EVANS: VISUALIZATION OF CARDIAC VALVES BY X RAYS

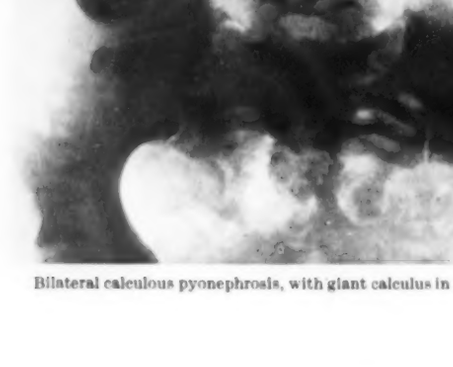

FIG. 1.—Right oblique view.

FIG. 2.—Left oblique view.

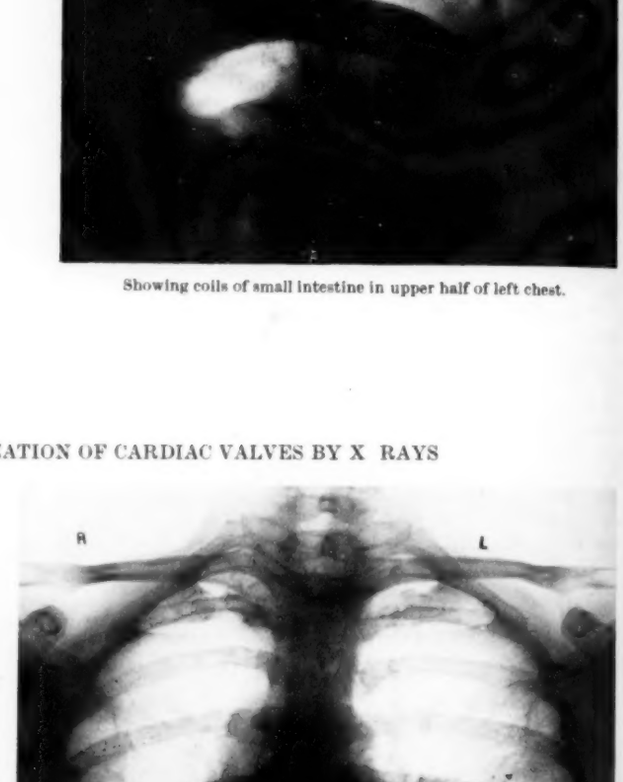

FIG. 3.—Anterior view.

In each illustration the arrow indicates calcification on aortic valves.

MEDICAL VISIT TO RUSSIA

MOSCOW CONGRESS ON RHEUMATISM

[FROM A CORRESPONDENT]

The Fourth International Congress on Rheumatism was held in Moscow, from May 3rd to 7th, and was attended by the delegates of no fewer than twenty-six nations. After the closure of the official Congress a party travelled to South Russia to inspect the medical arrangements of this part of the country and to view the spas and health resorts of the Caucasus and Black Sea regions. Another party, with less leisure, went to Leningrad, where they spent three days, returning home from there by boat.

SCIENTIFIC SESSIONS

The official opening was performed by the People's Commissioner for Health in the presence of over 2,000 persons, and the scientific sessions commenced with papers on the subject of rheumatism and the heart from the President of the Congress, Professor Konchalovsky, Dr. P. M. Weil (Paris), Dr. Coburn (New York), Professor Singer (Vienna), Dr. Bradley (England), Dr. Schlesinger (London), Professor Holsti (Helsingfors), Professor Kissel (Moscow), and others. An excellent pathological and therapeutic museum was then inspected in the "Hall of Savants," where the remaining sessions took place. During the afternoons sight-seeing tours were arranged for the delegates, who were able thus to visit the Kremlin, the tomb of Lenin, St. Basil's Cathedral, and other orthodox "sights." In addition, tours were made each day to the various fine physiotherapeutic clinics of Moscow, the children's hospitals, abortion clinics, big factories—each of which has a clinic and beds attached—and the Central State Institute of Hydrology and Climatology (Professor Danichevsky). On the following days the discussions centred round the subjects of the balneological treatment of chronic rheumatism and arthritis in miners, and transport and metal workers. Papers on these subjects were presented, among others, by Professors Plate (Hamburg), Connut (Prague), Vlastos (Athens), Dalmady (Budapest), and Pisani (Italy), and Doctors Fischer (Paris), Kahlmeter (Sweden), Fortescue Fox (London), Danichevsky (Moscow), Schmidt (Pistany), Copeman (London), and Buchstab (Odessa). On the first evening a banquet was arranged at the Hotel National for the delegates, whilst on the second night a special performance was given at the State Opera House. On the third evening, certain of the delegates had the unusual distinction of being entertained by Kalinin, the President of the U.S.S.R., to dinner in the Kremlin.

THE TRAVELLERS' LOG

The party who travelled southwards left Moscow on May 8th, and arrived at Kharkov, an industrial centre, halfway between Moscow and the Black Sea, in time for a late breakfast on the next day. Here, as elsewhere, they were met by a delegation from the State Public Health Ministry and from the local medical societies. They were shown round all that was most interesting from both the medical and lay sides, were entertained sumptuously, and then sent on their way to their next "port of call"—a large "collective" farm in the North Caucasus region. The distance traversed necessitated continuous night travel through the three weeks' duration of the tour, and proved somewhat fatiguing. It was, however, of the greatest interest to study the practical application of communism to medicine in a country of 170 million inhabitants. The result cannot, the English party thought, be yet judged either as a complete success or as a failure. It was felt, however, that, although a great deal remained to be done, much, nevertheless, had already been accomplished, particularly in view of the previous extreme backwardness of Russia in this sphere. A spirit of enthusiasm seemed to imbue the majority of the medical men with whom we talked, despite the very low standard of comfort enjoyed by these men in comparison with the standards of the West.

The further centres visited included Sotchi, Gagri, and Sukhum, beauty spots on the Black Sea; two days on the Black Sea itself en route for Yalta and Sebastopol, in the Crimea; Odessa, where some of the party took the famous "Liman" mud baths; and, lastly, Kiev, the capital of the Ukraine, where a final banquet and performance at the Opera were provided after a day of energetic sight-seeing in almost tropical heat.

JOINT COUNCIL OF MIDWIFERY

The Joint Committee on Midwifery held its second meeting on May 30th, with the Earl of Athlone in the chair, and received the reports of the Training and Distribution and the Administrative Subcommittees appointed last January. Among those present were:

Sir Francis Fremantle, M.P., and Miss Megan Lloyd George, M.P.; Dr. J. S. Fairbairn and Mr. L. C. Rivett, representing the British College of Obstetricians and Gynaecologists; Mrs. Stanley Baldwin and Lady Williams, representing the National Birthday Trust Fund; Miss Pye, Miss Burnside, and Miss Carter, representing the Midwives' Institute; Sir William Hale-White and Miss Wilmshurst, representing the Queen's Institute of District Nursing; Miss Doubleday, representing the College of Nursing; Dr. W. H. F. Oxley, representing the British Medical Association; Miss Wooldridge and Miss Coleman, representing the Association of Inspectors of Midwives; Major Elton Longmore, and Dr. Newnham.

RESOLUTIONS ADOPTED

The report of the first subcommittee, under the chairmanship of Dr. Fairbairn, contained six resolutions (five of which dealt with technical matters), which will be referred back to the constituent bodies for their approval or amendment. The sixth, which was unanimously approved by the committee, was as follows:

> "This committee is of opinion that a detailed scheme should be prepared for the enlistment of midwives throughout the country in an organized service, suited to the needs of each district, and having due regard to the retention of the mother's freedom of choice of attendant."

It was resolved that this resolution should constitute the terms of reference for the future work of the committee, together with the fourth and last resolution submitted by the Administrative Committee. The Administrative Subcommittee, under the chairmanship of Sir Francis Fremantle, had been examining the problem of the payment of the midwife's fee in necessitous cases, and submitted the following resolutions, which were passed unanimously, and will be referred back to the constituent bodies:

> "That it be made compulsory upon local authorities under the Midwives Acts or the Maternity and Child Welfare Acts (1) To pay the midwives' fees in necessitous cases. (2) That the term 'necessitous' should be interpreted to mean that in computing all resources the whole of the maternity benefit, exclusive of any increase in such benefit by way of additional benefits and of any second maternity benefit, shall be disregarded. (3) That the manner of claiming her fee by the midwife shall be clearly defined and shall not necessarily entail application to and approval by the local authority before the birth."
>
> "That in every case where for her safety the mother is removed to hospital the local authority should be required to make a payment to the midwife on an approved scale for such pre-hospital treatment as she may have carried out."
>
> "That where the local authority have paid such fees they shall have power to recover unless it be shown to their satisfaction that by reason of poverty the patient is unable to pay such fee."
>
> "The committee is of opinion that further consideration of the whole question of the remuneration of midwives as bearing on the efficiency of the midwifery service is urgently required."

The name of the committee was changed from "The Joint Committee on Midwifery" to "The Joint Council of Midwifery."

THE BIRTHDAY HONOURS

The Honours List, issued on the occasion of His Majesty's birthday, includes the names of the following members of the medical profession:

G.C.V.O.

Sir MILSOM REES, K.C.V.O., D.Sc., F.R.C.S.Ed., Laryngologist to Their Majesties the King and Queen.

K.C.M.G.

AMBROSE THOMAS STANTON, C.M.G., M.D., F.R.C.P., Chief Medical Adviser to the Secretary of State for the Colonies.

K.C.V.O.

MAURICE ALAN CASSIDY, C.B., M.D., F.R.C.P., Physician Extraordinary to the King.

K.B.E. (Civil Division)

FREDERICK GRANT BANTING, LL.D., M.D., D.Sc., of the Dominion of Canada, discoverer of insulin.

Knighthood

Major ROBERT GEORGE ARCHIBALD, C.M.G., D.S.O., M.D., R.A.M.C. (ret.), Director, Wellcome Tropical Research Laboratories, Sudan.

COMYNS BERKELEY, M.A., M.D., M.Chir., F.R.C.P., F.R.C.S., F.C.O.G., M.M.S.A., Consulting Obstetric Surgeon, Middlesex Hospital, Director of the L.C.C. Radium Centre.

GRAFTON ELLIOT SMITH, M.D., Litt.D., D.Sc., F.R.S., F.R.C.P., Professor of Anatomy in the University of London (University College).

Major-General JAMES DRUMMOND GRAHAM, C.B., C.I.E., K.H.S., I.M.S. (ret.), late Public Health Commissioner with the Government of India.

Rai Bahadur UPENDRA NATH BRAHMACHARI, Medical Practitioner, Bengal.

C.B. (Military Division)

Major-General PATRICK HAGART HENDERSON, D.S.O., M.B. (late R.A.M.C.), Honorary Physician to the King, Director of Hygiene, the War Office.

Major-General ERNEST ALEXANDER WALKER, M.B., F.R.C.S. Ed., I.M.S., Honorary Surgeon to the King, Director of Medical Services, India.

C.B. (Civil Division)

Surgeon Rear-Admiral PERCIVAL THOMAS NICHOLLS, M.R.C.S., L.R.C.P.

C.I.E.

Lieut.-Colonel JOHN ALFRED STEELE PHILLIPS, I.M.S., Director of Public Health, Bihar and Orissa.

Lieut.-Colonel HAROLD HOLMES KING, I.M.S., Director, King Institute, Guindy, Madras.

C.V.O.

LOUIS FRANCIS ROEBUCK KNUTHSEN, O.B.E., M.D.

C.B.E. (Military Division)

Group Captain EDWARD CECIL CLEMENTS, O.B.E., M.R.C.S., L.R.C.P., R.A.F.

C.B.E. (Civil Division)

JOHN CROSTHWAITE BRIDGE, F.R.C.S.Ed., M.R.C.P.Ed., D.P.H., Senior Medical Inspector of Factories, Home Office.

WILLIAM HENRY PEACOCK, M.B., B.Sc., Deputy-Director of Health Services, Nigeria.

O.B.E. (Military Division)

Colonel WALTER LISTER, T.D., M.R.C.S., L.R.C.P., late Assistant Director of Medical Services, 49th (West Riding) Division, Territorial Army.

O.B.E. (Civil Division)

HARRY EDWARD HEWITT, M.D., B.S., D.P.H., Second Medical Officer, General Post Office.

Miss KATHERINE STEWART MACPHAIL, M.B., Ch.B.Glas., Member of the British Community in Belgrade.

Khan Bahadur KHWAJA ABDUL RAHMAN, M.B., Ch.B.Ed., D.P.H., Director of Public Health, Punjab.

GEORGE MACLEAN, M.B.E., M.B., Ch.B., Sleeping Sickness Officer, Tanganyika Territory.

I.S.O. (Companion)

Rai Sahib LALA RAM SAHAI, Sub-Assistant Surgeon, Residency Hospital, Indore, Central India.

M.B.E. (Military Division)

Flight Lieutenant FRANCIS WILFRID PETER DIXON, M.B., B.S., R.A.F.

M.B.E. (Civil Division)

JOSEPH ANTOINE HERMANN ANDRÉ, M.R.C.S., L.R.C.P., Superintendent, Leper Asylum, Mauritius.

ANDREW BUCHANAN MACDONALD, M.B., Ch.B., for devoted work in the treatment of lepers in Nigeria.

JOSEPH LENNOX DONATION PAWAN, M.B., Ch.B., Government Bacteriologist, Trinidad.

Major FRANK HERMANN OTTO, Indian Medical Department, Assistant Surgeon on the Port Health Staff, Bombay.

GEOFFREY OSMUND SCHMIDT, Indian Medical Department, Assistant Surgeon, British Consulate, Kashgar.

SOWANI PUAMAU, First Native Medical Practitioner, Gilbert and Ellice Islands Colony, Western Pacific.

Hon. M.B.E. (Civil Division)

YUSUF HAJJAR, M.D., Medical Officer in charge of the Government Hospital at Jerusalem, Palestine.

Kaisar-i-Hind Medal (First Class)

Miss DORIS LOUISA GRAHAM, M.D., B.Ch., Medical Missionary, Krishnagar, Bengal.

Miss MILLICENT VERE WEBB, L.R.C.P. and S.Ed., L.R.F.P.S., F.C.O.G., Chief Medical Officer, Women's Medical Service, and Secretary of the Funds under the Presidency of Her Excellency the Countess of Willingdon.

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY

The annual general meeting of the London and Counties Medical Protection Society was held at Victory House, Leicester Square, on May 30th, with Sir JOHN ROSE BRADFORD in the chair.

The chairman, in presenting the annual report, said that there was no very outstanding feature to which he had to call attention. There had been a notable increase of work during the past year, not only in the number of applications for advice received, but in the number of cases which had had to be seriously considered by the society. Fortunately, settlements had been arrived at in the large majority of instances and litigation avoided. He had again to lay stress on the importance of membership of a defence society: the fact still remained that something like one-third of the practising members of the profession appeared content to remain without this protection. He referred regretfully to losses sustained during the year, in particular by the deaths of Dr. E. Collier Green and Sir George Makins, vice-presidents of the society for twenty-three and seventeen years.

The report was adopted, and Sir John Rose Bradford was unanimously re-elected to the presidency. The vice-presidents were also re-elected, with the addition of Sir William Hale-White and Sir Cuthbert Wallace, as were the retiring members of council, the secretary (Dr. C. M. Fegen), and the treasurer (Dr. R. L. Guthrie). In speaking to one of these resolutions Dr. C. O. HAWTHORNE said that it was really astonishing when one read the annual report how any member of the profession could comfortably sleep at night unless he had the protection of a defence society. The British Medical Association never lost an opportunity of urging newly qualified practitioners to join a defence society as one of their first acts after registration. The report showed also that it was advisable even for those of riper years to maintain their association with such a body, because new points of attack continually appeared to which no one's attention had ever been drawn before. The meeting concluded with votes of thanks to the officers, legal advisers, and staff.

THE SOLICITORS' REPORT

The solicitors' report, which was embodied in the general report of the society, urged that the present relation of insurance practitioners to the Ministry of Health in the matter of prescribing appeared to need revision. The insurance practitioner was between the devil and the deep sea. If he failed to prescribe adequately he was liable to be brought before the medical service subcommittee on a charge of having failed to render all necessary and proper services; if he prescribed what in his opinion were the best drugs, his average might be above the average for the area. One piece of legis-

lation during the year would be of great value to the medical profession in High Court proceedings. Prior to the passing of the Administration of Justice (Miscellaneous Provisions) Act, 1933, every litigant had the right to ask that his action should be tried by a jury, but that right, save in certain specified cases, had now been taken away. In the past patients instituting proceedings against medical men had, for obvious reasons, asked for a jury, and there were no grounds for opposing the trial of a jury action. It had sometimes been found that, despite the evidence, a jury had returned a verdict for the patient, evidently moved by motives of sympathy, and once it was found by a jury that a doctor had been guilty of negligence the verdict was practically impossible to upset. By the passing of the Act a number of these difficulties would be removed. The solicitors further mentioned that the wider use of psychological treatment increased the risk of attack by patients, particularly women, upon practitioners in this field. There were a large number of cases in which women patients had made the most extraordinary accusations against the doctor treating them. It was a risk inherent in this type of treatment: the need for safeguard through membership of a defence society was again emphasized.

SHENLEY MENTAL HOSPITAL

OPENING BY THE KING

The Middlesex County Mental Hospital at Shenley, in Hertfordshire, was opened by the King, who was accompanied by the Queen, on May 31st. A description of the new hospital, which is situated in grounds of about 500 acres, appeared in these columns of February 10th (p. 257).

Their Majesties, on arrival, were received in a marquee by Viscount Hampden, Lieutenant for Hertfordshire, who presented Mr. Howard S. Button, chairman of the Middlesex County Council, Sir William Lobjoit, chairman of the Hospital Visiting Committee, and Mr. L. G. Brock, chairman of the Board of Control. A move was then made to the recreation hall, a large building constructed for stage and cinema performances, with seating accommodation for 1,000, where Sir William Lobjoit read an address of welcome. He said that this institution was the first public mental hospital to be designed and opened since the war. The cost of its erection was over half a million. The present buildings accommodated 1,046 patients—the ultimate accommodation would be 2,000—and the detached villa plan had been adopted so as to facilitate the classification and treatment of patients in comparatively small groups on the most modern scientific principles. The reception hospital, which was fully equipped for intensive medical investigation, and the adjacent convalescent units were specially designed for the treatment of early mental illness. In this connexion the provisions of the Mental Treatment Act, 1930, had been borne in mind, particularly the enlargement of the opportunities for voluntary treatment. Every facility was available for the occupation and recreation of patients, both in the recreation hall and in the ample grounds.

The King, after expressing the pleasure of the Queen and himself at the opening of the hospital, and their interest in the mental health service, continued: "In recent years important advances have been made in the ideas governing the treatment of mental illness, and the Act to which you have referred has enlarged the opportunities for applying these new methods. It is necessary that such progress should be reflected in the provision which local authorities make for the mentally afflicted under their care. I note with satisfaction that, in designing this mental hospital, you have paid special regard to the treatment of early mental illness by the provision of the reception hospital, which I look forward to seeing to-day. I am glad that you have provided a nurses' home. Such provision not only contributes to the contentment and well-being of the nurses, but has a profound influence upon the recruitment of this important branch of the hospital staff. I congratulate the Middlesex County Council, the Visiting Committee, and the Board of Control upon the manner in which this important enterprise has been conceived and carried out."

After the King had declared the hospital open dedicatory prayers were said by the Bishop of St. Albans, and the members of the committee, the medical superintendent (Dr. G. W. Shore), the matron, and other officers were presented. The King and Queen then inspected certain parts of the hospital, including the kitchen, the reception hospital, and the nurses' home, signed the visitors' book, and took their departure, after which there was a general inspection by the guests. The hospital has its own water supply, sewage treatment works, lighting plant, and various other services, for the distribution of which three and a half miles of underground subway has been constructed. It is fully equipped with operating theatre, dental and other clinics, *x*-ray and special treatment rooms, dispensaries, and laboratories. Residences have been provided for the medical superintendent and deputy medical superintendent, and houses for assistant medical officers, senior officials, and a staff village form part of the ultimate scheme.

Scotland

New Chairman of Scottish C.M.B.

At a meeting of the Central Midwives Board for Scotland, held on May 31st, Dr. Robert Cochrane Buist, consulting gynaecologist to the Dundee Royal Infirmary, was appointed chairman of the Board in succession to the late Dr. James Haig Ferguson. Dr. Buist is a graduate of Cambridge, St. Andrews, and Edinburgh Universities, and in 1932 received the honorary degree of LL.D. from St. Andrews. He is a vice-president of the British Medical Association, and was at one time a prominent member of Council, deputy chairman of the Representative Body, and chairman of the Journal Committee. He has been an active member of the Scottish Committee of the Association, and served for some years as its honorary secretary.

Edinburgh Royal Infirmary

The last annual report by the managers of the Royal Infirmary of Edinburgh recalls that from early times this institution has profited very greatly from the large sums bequeathed by means of legacies. An indication of the deep hold of the Infirmary on the affections of Scottish people at home and abroad is afforded by the announcement that during the year under review bequests were intimated from South Africa, the United States, Canada, India, and Greece, while the occupations of the testators included those of a gamekeeper, a farm labourer, a quarryman, a domestic servant, and a nurse. The amount received for general purposes and endowment was £56,247. In addition, a legacy of £4,500 was received for cancer research, and is being applied primarily for assisting work in the radium and *x*-ray departments. The ordinary income was maintained; there were increases in patients' donations, contributions from approved societies, and payments by insurance companies under the Road Traffic Act, but a reduction in interest and dividends from invested funds is likely to be still more serious this year. The Infirmary extension scheme has been carefully reviewed in the light of present conditions. It was discovered that the original proposals to erect a combined gynaecological and maternity hospital, together with a home for nurses, would cost very much more than the amount which had been collected or was likely to be collected in the immediate future. It was decided, therefore, to restrict the scheme to a maternity hospital and the building of a new nurses' home. The Board of the Infirmary was already committed to build a new maternity hospital by the agreement entered into with the directors of the existing Edinburgh Royal Maternity and Simpson Memorial Hospital. Provision is made for 122 beds, with departments for all sections of maternity work,

including facilities for the instruction of medical students and midwives. The new nurses' home will give accommodation for 260 nurses. It is proposed to erect this building on a site to the north of the new maternity hospital, partly on the site of the former George Watson's College, and partly on ground acquired at the foot of Archibald Place. Even with the restriction of the scheme it is anticipated that the capital cost will exceed the available funds by between £40,000 and £50,000, so a further appeal will have to be launched. Construction of the new pavilion to house the skin and venereal diseases departments on a site to the north of the eye department is proceeding. When complete, this addition will set free for other purposes valuable accommodation in the main building.

Lord High Commissioner in Edinburgh

His Grace the Lord High Commissioner, Mr. John Buchan, who represents the King at the annual Assembly of the Church of Scotland, has made his usual round of visits to hospitals in Edinburgh. Accompanied by Mrs. Buchan, he paid a visit to the Royal Infirmary on May 23rd. In presenting prizes won by nurses in the recent examinations, Mr. Buchan remarked that he had made up his mind that he would write a medical book, because he wished to know more about medical science, and from long experience he knew that the way to find out more about a subject was to write a book on it. Mrs. Buchan on the same day paid a visit to the Queen's Institute for District Nursing, where she was received by Lady King Stewart, representing the Scottish Council, who informed her that there were now 503 affiliated nursing associations in Scotland, employing 895 nurses. On May 24th a visit was paid to the Deaconess Hospital of the Church of Scotland, which, as Mr. Buchan recalled, is the only hospital in Britain owned by a Protestant Church. He made reference to the loss the hospital had sustained in the recent death of its chairman, the late Lord Sands, who, he said, had been a man of many-sided interests. The proposed extension of the hospital, he had been informed, was to be called the Lord Sands Memorial Wing. Mrs. Buchan paid a visit also to the Royal Maternity and Simpson Memorial Hospital, where she made a tour of the wards and inspected the seventy babies at present in the hospital.

Conference of Health Visitors

The Scottish National Health Visitors Association, to the number of nearly 200 delegates and members, held its fifteenth annual conference last month at Kilmarnock. After a civic welcome by Provost Henry Smith, a paper dealing with maternal morbidity, by Dame Louise McIlroy, was read by Dr. Arbuckle Brown, deputy medical officer of health, Glasgow. This was followed by an address by Professor Munro Kerr, who said that maternal morbidity and mortality were influenced by three primary factors—the adequacy of ante-natal care, the efficiency of natal care, and the degree of co-ordination between the different agencies concerned with maternal care. Many of the unsatisfactory conditions at present connected with ante-natal supervision would automatically disappear if the agencies concerned with maternal welfare were better co-ordinated. For many years, Professor Munro Kerr said, he had advocated a maternity service for the country, and to-day everyone admitted that a maternity service in some form was essential for insured persons, for those who would become insured if the Insurance Act was extended, and for the destitute. The idea underlying his scheme was the establishment of a network of obstetric centres throughout the country, utilizing existing institutions and making additions where necessary. In the scheme he proposed the institutional part of the service for Scotland would consist of: (1) four primary hospital centres in Edinburgh, Glasgow, Aberdeen, and Dundee; (2) secondary hospital centres in towns and in cottage hospitals; and (3) subsidiary centres at maternal and infant welfare clinics, which ought to be closely linked with the hospitals of the locality and the centres for its domiciliary service. The activities of family doctors, midwives, health visitors, and social workers should be based on these centres and clinics, which, in addition to their purely medical function, would be invaluable centres for the training of the last three groups of workers. Dr. B. R. Nisbet, medical officer of health, Kilmarnock, said that a careful inquiry had shown that in Kilmarnock 81 per cent. of the mothers had some ante-natal care, while in 50 per cent. it was considered adequate. These figures were, comparatively speaking, good, though not ideal, and perhaps explained the fact that out of 1,500 births in the town during two years there had been only two maternal deaths. The maternity home had rendered good service, but was now too small to cope with the needs of the district, and it had been decided to build a new maternity hospital, which would maintain the close existing relation of the practitioners in the district with the official maternity scheme.

Selkirk Hospital

The annual meeting of Selkirk Cottage Hospital Association was held on May 31st, when it was announced that the endowment fund stood at £12,277, while there was a balance to carry forward to next year out of which the committee recommended that £500 should be transferred to the endowment fund. It was reported that during the year 231 patients had been treated under the scheme, and that there had been 134 private patients.

Ireland

The State and the Practice of Medicine

Dr. Charles S. Thomson, medical superintendent of health, Belfast, in the course of a paper read at the Royal Victoria Hospital, stated that a question which was giving concern to many people was the question of whether the practice of medicine, and this included the hospitals, was to be governed by the State, in whole or in part, or not at all. The mere mention of putting the voluntary hospitals on the rates, for example, was sufficient to arouse a commotion within the breasts of thousands, for it was widely held that the splendid work of the voluntary hospitals was largely due to the freedom which, in itself, made for the success of those institutions. It was held that the very soul of the hospitals would be destroyed if the so-called cold, formal hand of the State replaced the close, personal touch which resulted from the voluntary system. Someone has said that a bank overdraft was a sign of wealth. Assuredly it conveyed the idea that the bank had good security before it parted with its money. In the case of the British hospitals the banks knew that there was excellent security in the profound respect and esteem in which the hospitals were held by the public, and that, in the last resort, notwithstanding the financial difficulties of the times, the public might be relied upon to see the hospitals through. They could therefore put aside any question as to whether a threat of State supervision of the voluntary hospitals was imminent. The question of the financial needs of their hospitals was one which sound organization, push, and drive ought to settle.

Public Health in the Irish Free State

Moving the recent vote in the Dáil for the Department of Local Government and Public Health, the Minister, Mr. S. T. O'Kelly, said that during the year mortality from all causes showed a reduction as compared with the preceding year. The number of deaths registered in 1933 was 40,650, as against 42,984 in 1932. Deaths from typhus numbered twelve, as compared with thirty in the preceding year; and from enteric fever sixty-nine—a reduction of thirteen. There was a welcome decrease in infant mortality. The number of deaths was sixty-five per 1,000 registered, as compared with seventy-two per 1,000 in 1932. The prevalence of diphtheria showed a serious upward tendency, the number of deaths being 414 as against 383 in the previous year. Measures for the immunization of children against the disease, however, were being widely adopted. The organization of public health services was proceeding satisfactorily. Child welfare schemes were being well maintained, while schemes for school medical inspection were now practically complete in the four county boroughs and in eighteen counties in which county medical officers of health were in charge. The number of children inspected by the school medical officers in 1932 was 112,776; the figure for 1933 was not yet available. Of the number examined in 1932, 37 per cent. were found to suffer from dental defects, 22 per cent. from tonsils and adenoids, 11.9 per cent. from defective vision, 3.9 per cent. from other eye defects, and 6.2 per cent. from malnutrition. These figures represented a decline as compared with those for 1931, except in the case of children suffering from dental defects. Great interest continued to be taken in this service by school managers, teachers, and parents of the children. In practically every case the advice of the county medical officer of health in regard to proper dieting had borne good results, and the number of children suffering from malnutrition was on the decline. The provision of free milk, for which a sum of £100,000 was included in the estimate, had helped largely in this respect. Dr. R. J. Rowlette, speaking during the debate, said he believed that the Minister was honest and earnest in his desire that public health administration should be improved, but there were various matters in which progress during the past year or two had been disappointing. Since 1925 it had been the law of the country that each county authority should appoint a county medical officer of health, but, in reply to a question a few days ago, the Minister had informed him that there were only eighteen such officers appointed in the twenty-seven county areas in the country, and, when pressed, the Minister had said that some of the county authorities had not enforced the law because of unwillingness to increase local rates. It was not, however, a matter of choice for county authorities. The law was there and should be obeyed; the Minister should take some action. The country, as the Minister must be aware, was far behind others in public health administration. Then, in the matter of medical inspection in schools, although the Act had been in force since 1919, only 30 per cent. of the children were being medically inspected. Infant mortality was increasing in the cities throughout the country. Every county, Dr. Rowlette continued, should have its infant welfare society. In 1932 the death rate in Galway of infants under the age of 12 months was 136 per 1,000 births registered, whereas the rate for the whole country was only 71. The rate in Waterford City was 132, in Sligo 134, and in Wexford 113. In Dublin, where there was a child welfare association, the rate was only 100. The Ministry should be far more active in encouraging the formation and development of such societies. He welcomed the report, which showed that the death rate from tuberculosis was the lowest on record. There had been a steady growth in the prevention and treatment of tuberculosis in Ireland for the last twenty years, and he was glad to see that it was bearing proof. But surely, with such striking evidence, the Minister could bring sufficient pressure to bear on the county of Longford to make the authorities provide for the treatment and prevention of tuberculosis as other counties had done. Referring to the question of pure milk supply, Dr. Rowlette said it was estimated that at least 50 per cent. of the cases of tuberculosis, other than tuberculosis of the lungs, were due to contaminated milk. Deaths under this heading for the year 1932 numbered 818, so that 409 deaths were due to the fact that the Oireachtas had neglected to do its duty in ensuring a pure milk supply. To those deaths could be added an enormous amount of illness and disability due to dirty milk. Why had the long-promised Clean Milk Bill not been introduced?

Medical Charity: Bequest by Sir William Whitla

The managing committee of the Royal Medical Benevolent Society in Ireland has acknowledged the receipt of £250, a legacy bequeathed by the late Sir William Whitla. By the terms of his will this sum is to be invested, and the income applied to medical men in Belfast, or their wives, and orphans in Northern Ireland. Sir William Whitla was a keen supporter of medical charities, and this legacy is typical of his generosity.

England and Wales

The Drought

Speaking at Swindon, on June 1st, on the occasion of the opening of the new water scheme, Sir Hilton Young described the measures being taken by the Government to relieve the drought, which existed, he said, over a large part of Northern Europe and America; unfortunately we were in the middle of it. The recent fresh period of dry days made it more necessary than ever to take every possible precaution in anticipation of the summer months, which were usually the driest. The emergency Act which came into force last month provided the necessary legal powers to increase and husband supplies, and the Government was pressing forward with the application of the Act in order to deal with the situation in the places where there was already, or would probably soon be, a shortage. Sir Hilton was arranging for a standing conference of the three representative bodies—the British Waterworks Association, the Institute of Water Engineers, and the Water Companies Association—to act in co-operation with the Ministry. They would thus bring to bear upon remedial measures all the available knowledge and experience of the experts and of those actually responsible for water supplies. The measures that were being taken would be effective in reducing the evils of the drought. Much could be done by the public for its own protection by economizing the use of water for domestic and industrial purposes by preventing waste and by reducing use for all purposes that were not essential.

Ministry of Health Circular on Birth Control

By direction of the Minister of Health a letter (Circular 1408) has been sent to maternity and child welfare authorities in England and Wales on the subject of birth control. This begins with a reference to the Ministry's memorandum (153/M.C.W.) dated March, 1931, and Circular 1208 of July 14th, 1931, and more particularly to paragraph 4 of the memorandum and paragraph 3 of the circular which deal with the provision under the Public

Health Acts of clinics for women suffering from gynaecological conditions. Paragraph 4 of the memorandum stated that the Government had decided that any Departmental sanction which might be necessary to the establishment of such clinics should be given only on condition: (1) that the clinics will be available only for women who are in need of medical advice and treatment for gynaecological conditions, and (2) that advice on contraceptive methods will be given only to married women who attend the clinics for such medical advice or treatment, and in whose cases pregnancy would be detrimental to health. The present circular (dated May 31st, 1934) recalls that the Departmental Committee on Maternal Mortality and Morbidity, in its final report published in 1932, called special attention to the importance of the avoidance of pregnancy by women suffering from organic disease such as tuberculosis, heart disease, diabetes, chronic nephritis, etc., in which child-bearing is likely seriously to endanger life. The Departmental Committee considered that advice and instruction in contraceptive methods should be readily available for such women. It was pointed out in the memorandum and circular of 1931 that the powers which the Public Health Acts confer upon local authorities for the provision of clinics limit their availability to sick persons, but the Minister is now advised that there is nothing to prevent the local authority from rendering such a clinic available for women suffering from forms of sickness other than gynaecological conditions. After careful consideration of the recommendation made by the Departmental Committee, the Minister is of opinion that where a local authority has provided a clinic at which medical advice and treatment are available for married women suffering from gynaecological conditions, and at which contraceptive advice is afforded to married women so suffering in whose cases pregnancy would be detrimental to health, it would be proper also for married women who are suffering from other forms of sickness, physical or mental, such as those mentioned in the Departmental Committee's report, which are detrimental to them as mothers, to be afforded contraceptive advice at the clinic if it is found medically that pregnancy would be detrimental to health. "What is, or is not, medically detrimental to health must be decided by the professional judgement of the registered medical practitioner in charge of the clinic."

Radiologists at Dinner

The annual dinner of the Section of Radiology of the Royal Society of Medicine took place at Claridge's on June 1st, with Dr. R. S. Paterson in the chair. The principal guests were Dr. Robert Hutchison, president-elect of the Royal Society of Medicine, and Mr. W. H. Collins, donor of the munificent gift of £35,000 to the Middlesex Hospital, earmarked for the equipment of the diagnostic section of the radiological department. Dr. Paterson, in proposing the health of the guests, referred to Mr. Collins as a man whose generosity was united to vision. He was one of those who believed in the continuance of the voluntary hospital system, the only disadvantage of which was its financial limitations compared with State or municipal provision. By his benefaction he had enabled the radiological department at Middlesex to combine the enormous advantage of voluntaryism with an unusual freedom from financial difficulty. Mr. Collins expressed the hope that the workers in the radiological departments of other hospitals would not be jealous of the good fortune of the Middlesex, but would rather invoke it as an example to their own boards and supporters. He congratulated the department on having Dr. Graham Hodgson in charge, saying how admirably Dr. Hodgson had collaborated with him in ensuring the best use of the help he had been able to furnish. Dr. Robert Hutchison, in proposing the health of the Section, said how much he owed, as a dietitian, to the confirmatory (or otherwise) work of the radiologists, though he viewed them rather as a judge in the lower court must regard their lordships of appeal: they had a way of upsetting one's best clinical diagnosis. A distinguished physician once told him that when he had to recommend the removal of an appendix but was not very sure on the subject he was careful to send the case to a sympathetic surgeon. Dr. Hutchison confessed that he also liked to send his cases to a sympathetic radiologist, who would let the poor physician down lightly when he proved to be wrong. The Section of Radiology appeared to be very vigorous; it represented one of the advancing lines of medicine, and was taking to itself more and more diagnostic resources and wider facilities for treatment. Dr. Hernaman-Johnson mentioned that although the Section in its present form was only three years old, it was one of the largest of the twenty-odd Sections of the Society, numbering some three hundred members—the largest Section of all, the Clinical, having four hundred.

Infants Hospital, Westminster

Prince George took the chair at a festival dinner, on May 30th, in the Guildhall, in aid of the Infants Hospital, Vincent Square, the company numbering more than 400. At the close of the evening the Prince announced that contributions to the special appeal fund totalled £19,000. Among those at the high table were the Lord Mayor of London and the Lady Mayoress, Dr. Eric Pritchard, medical director of the hospital, Dr. G. F. Still, and Dr. H. Morley Fletcher. In proposing the toast of "The Hospital" His Royal Highness conveyed the regret of the Princess Royal at being unable to be present on behalf of an institution in whose welfare she, as its president, took a very keen interest. He recalled that this was the first hospital in the world whose special object it was to care for children under 5 years of age, and that large sums of money had been spent with much thought in bringing the hospital up to its present well-equipped position. Everything required in a modern hospital had been installed in miniature. The research work unceasingly carried out was providing most valuable data, and through this there was a continuous improvement in nursing and in treatment, to the advantage of many sick children all over the country. "If the present knowledge of infantile diseases had been available twenty-five years ago I feel sure that many C3 men and women would be classed A1 to-day." Sir Gomer Berry, chairman of the Committee of Management, in responding to the toast, said that the hospital now had 100 cots in Vincent Square and eighteen at the convalescent home at Burnham, while the out-patient department could accommodate 2,000 cases a month. 'After thanking Prince George for the honour he had conferred on them, he paid a tribute to the medical and surgical staff, under the guidance of Dr. Pritchard, whose work for the health of children was widely known and appreciated. Sir Ernest Benn submitted the toast of "The Lord Mayor and the Corporation of London," and Sir Charles Collett replied. Dr. Cyril Norwood, head master of Harrow, in proposing "The Citizens of To-morrow," looked forward to a system of physical education to which as much care and thought would be given as had hitherto been applied to purely mental education. Mrs. Stanley Baldwin, who replied, said that to save the children they must begin with the mothers. Foreign countries, and notably Italy, realized how much their future depended upon the younger generation. The medical, nursing, and administrative staff of the hospital were toasted by Sir Harold Bellman, and Dr. Eric Pritchard replied.

Reports of Societies

CONTROL OF INFECTIOUS DISEASES

At a meeting of the Society of Medical Officers of Health, held at their house on May 25th, with Dr. CHARLES PORTER in the chair, Dr. H. STANLEY BANKS, medical superintendent, Park Hospital, London, opened a discussion on "Current Methods of Control of Infectious Diseases."

Dr. Banks critically reviewed the main conclusions of Report No. 35 of the Ministry of Health on scarlet fever. The report favoured limitation of the number of scarlet fever cases admitted to hospital, and the preferential admission of pneumonia, measles, and influenza. This had been tried, particularly in London, but there was still an insistent demand for hospital facilities in scarlet fever. An alternative method was to shorten the period of detention in hospital to two or three weeks. This had been found to be quite practicable in the great majority of cases which were treated adequately with scarlatinal antitoxin at an early stage of the disease, and particularly by the intravenous route. Complications were then very few, and almost entirely limited to children under 5 years of age, who were susceptible to mixed infections. Short detention in scarlet fever wards was in the interest of the patient, provided that nutrition was maintained from the outset. Late complications in scarlet fever wards were probably often the result of superadded infection from patient to patient. It was desirable to combine short detention with attendance at an out-patient clinic at least once before the patient returned to work or school. This method had, in his experience, given satisfactory results. He agreed with the report in condemning terminal disinfection of houses and wards as an ineffective procedure. Current disinfection of hands and fomites during the illness was the important matter. This subject had been discussed *ad nauseam*, and the modern view was accepted by most authorities. He suggested that the time had come to make it public.

Dr. E. H. R. HARRIES, dealing with diphtheria, said that this was a preventable disease, only to be controlled adequately by the active immunization of susceptible children. The disease was prevalent and severe in this country at the present time, and it was to be hoped that immunization upon a scale sufficiently great to affect incidence might not be unduly delayed. Many cases of severe clinical type were associated with either the *gravis* (starch-fermenting) or *intermediate* (Mair's barred form), strains originally described by the Leeds workers. The swab, used as a primary or chief means of diagnosis, frequently resulted in fatal delay in the injection of antitoxin, and in the erroneous diagnosis of diphtheria in patients harbouring non-toxic organisms. Patients should be sent into hospital upon suspicion without swabbing, the necessary investigations being left to the hospital to carry out. Practitioners were reluctant to inject antitoxin pending diagnosis. Fears of anaphylaxis, especially with modern, practically protein-free, concentrated sera, were greatly exaggerated. Severe reactions, even with massive intravenous dosage, were extremely rare, and were controllable by the injection of adrenaline, which should always be available. Post-tonsillectomy diphtheria and scarlet fever might be obviated by the prior injection of a combined prophylactic dose of diphtheria and scarlet fever antitoxins. Preliminary Schick and Dick tests were preferable, as these would indicate which, if any, of the specific sera were called for. The value of terminal swabbing was problematical. The ordinary standard was two consecutive negative swabs from nose and throat. Chronic carriers nearly always had some nasopharyngeal abnormality which called for rational surgical measures. True intermittency of the carrier state among diphtheria convalescents nursed in open wards was rare. The apparent intermittency was frequently due to contact reinfections. Convalescent carriers were best treated in cubicles or in the open air. Swabbing as a means of detection of carriers in the community was hopeless, but found its legitimate uses in the control of outbreaks in institutions when combined with virulence tests and Schick tests.

Dr. W. GUNN, in opening the discussion on measles and whooping-cough, mentioned some of the clinical and epidemiological features of these infections in the search for more rational and effective measures for their control. He referred to the great increase of facilities for hospital treatment and the wider provision for domiciliary care of measles cases by various health authorities and agencies within recent years. He exhibited charts detailing the numbers of measles patients admitted to the infectious diseases hospitals of the late Metropolitan Asylums Board and of the London County Council during the years 1924–34, and the numbers of contacts injected with immune measles serum during the last two epidemics, showing a steady increase of those two measures for measles control. While a great future was predicted for the general employment of immune serum in the prevention and attenuation of measles, the benefits of routine hospitalization of measles cases were probably overrated. To justify the expenditure of much public money and energy it was necessary to show that hospital treatment gave much better results than those following domiciliary care. Bacteriological evidence was brought forward to prove that the majority of the complications of measles were due to invasion by the haemolytic streptococcus, transmission of which from patient to patient was readily traceable, especially when they were nursed in ordinary "open" wards. He urged the general application of "bed-isolation" principles to the nursing of all cases of measles in the early stages of the disease, pointing out that the problem of "cross infection" was thereby largely solved. The sole exception to this was chicken-pox, ward outbreaks of which were readily controlled, as it was usually possible to identify the immunes and isolate the rest in appropriate wards. The frequency with which cross infection was directly attributable to exposure in the waiting rooms of practitioners and the crowded waiting halls of general hospitals, and measures for checking it, were mentioned. The therapeutic and prophylactic employment of various immune sera—measles, adult and convalescent, streptococcal and diphtheritic—in averting the most dreaded complications and secondary infections associated with measles was briefly discussed. Definite benefit appeared to follow the intravenous administration of immune measles serum when given in the early phases of the disease. Our measures for the control of whooping-cough, curative and preventive, remained unsatisfactory both for the individual and for the community. Routine administration of so-called specific drugs was unnecessary, and even harmful. Drugs should be reserved for cases where indications were present calling for their exhibition. Vaccines prepared from the Bordet-Gengou bacillus had proved useless—and occasionally dangerous—in treatment, but there was room for an extended investigation into the efficacy of a reliable vaccine in the prophylaxis of whooping-cough, such as had been carried out in America and Canada and on the Continent. In this country many workers had had adequate experience of the most approved methods of control of measles and whooping-cough, but, so far, the necessary administrative machinery and driving force had been lacking. Little real progress could be expected unless the various public health and hospital authorities joined hands in a resolute endeavour to stamp out the more serious acute infectious diseases.

On May 24th the Mayor of Middlesbrough opened the new municipal hospital for children at Holgate. The buildings were transferred from the late board of guardians in 1930, and have since been converted for their new use at a cost of about £2,500. Provision has been made for eighty-two beds, the acute cases being warded on the ground floor of the two-story building. There is also a schoolroom, and arrangements are made for the teaching of children with chronic diseases in the wards. An up-to-date operating theatre and an anaesthetic room are placed on the first floor.

CORRESPONDENCE

Psychological Effect of Hysterectomy

SIR,—I should very much value a discussion on the results of hysterectomy, partial or total, in your journal. One has been taught that the removal of the uterus has no effect, psychological or physical, on the woman, but I know of two cases where the effect was profound.

Case 1.—A woman of 33 was found to have a large fibroid. The surgeon told her that it might be possible to do a myomectomy, but advised partial hysterectomy, which was duly performed. The ovaries were left untouched. About six months later the patient began to suffer from profound depression, which reached its acme at the times when the menstrual period would normally have occurred. For over a year she was almost an entire nervous wreck, but gradually improvement set in, and she got over the acute breakdown. To-day, six years after the operation, she still is somewhat neurasthenic, and says she feels quite definitely that she has changed completely in character, and that the operation has had a profound psychological effect. I may add she has since married and has a satisfactory marital relationship. She is an extremely well-educated sensitive woman.

Case 2.—A married woman, aged 39, with two children, was advised partial hysterectomy for excessive periods due to fibroids. In this case the patient's reactions to the operation were not so marked, but she found that her normal sexual response to her husband had disappeared. This in itself might have been enough to agitate her seriously, but, in addition, the husband, an intelligent, well-educated man devoted to his wife, found that the idea of the absence of the uterus aroused such a distaste in his mind that he became impotent. His feeling of affection in no way changed, but the whole marital relationship was completely wrecked.

Both these instances seem sufficiently important to me to indicate that research into the matter might be extremely valuable. It appears that in the first case myomectomy would have been far preferable and should have been done. In the second case, I know that the patient to-day would infinitely prefer the inconvenience of menorrhagia and be as she was before to the sense of mutilation and shipwreck of her married life which she has now.

One knows that there are cases when hysterectomy is inevitable, but it does seem to me that the operation should be the final resort, and the pros and cons weighed more carefully than they are to-day. As a woman I feel that hysterectomy is bound to have a most profound psychological effect.—I am, etc.,

WINIFRED COPPARD, M.R.C.S., L.R.C.P.

Walberswick, Suffolk, May 28th.

Diverticulitis and Diverticulosis

SIR,—In an interesting paper on the surgical aspects of diverticulitis, in the *Journal* of June 2nd (p. 973), Mr. Harold C. Edwards writes:

> "On the history, the physical examination, and the *x*-ray findings, it may be impossible to distinguish diverticulitis from diverticulosis, except in the severer cases, and I have failed in my attempt to estimate the percentage of cases of diverticulosis in which inflammation occurs."

This can, of course, be true, but may I state that with careful radiology the diagnosis in early cases between diverticulosis and diverticulitis is, in our experience, easy, as soon as, say, an inch of the bowel wall has become involved in the oedema from adjacent inflamed pouches. First, the large jagged appearance of a diverticulitic area is characteristic; secondly, peristalsis can be observed to cease at that place; and thirdly, such an area does not undergo the continual changes in outline which healthier parts do, whether dotted with diverticula or not—changes which are easily shown by superposing successive films. The jagged palisade appearance is also distinct from that of spasm without organic lesion, of growth, or of the pre-diverticular state. Difficulty in diagnosis may, of course, arise, but is usually confined to the somewhat rare advanced and complicated cases. The essential is to obtain the piece of bowel concerned in profile, if possible from more than one aspect.

Pictures demonstrating the above points, with clinical records, have been published by Mr. Marxer and myself (*Quart. Journ. Med.*, October, 1925; *British Medical Journal*, January 23rd, 1926; and *Lancet*, May 21st, 1927).—I am, etc.,

Ruthin, June 2nd. EDMUND SPRIGGS.

Periodic Health Examinations

SIR,—In his lecture "Cancer: with Special Reference to Early Diagnosis," printed in the *British Medical Journal* of May 19th (p. 881), Dr. Roy Ward points out the value of periodic health examinations for the early diagnosis of cancer and the merits of life insurance companies in this line. "In the U.S.A.," he says, "life insurance companies give free examinations biannually to all life policy holders over 40." And at the same time he wishes such a system could be instituted in other countries.

May I first of all mention that it is not quite as good in America as Dr. Roy Ward thinks. Examination is not offered to all insured persons over 40, nor is it given biannually, even when it takes place. It depends on the sum of insurance taken out at what intervals the examination occurs: for low sums it is a five-year interval; for large sums a yearly one. The age is not limited; but no company grants the periodic examination to all policy holders. Then there are two English companies which grant such examinations—the "Legal & General" and the "Wesleyan & General." The former, on request, grants every year a health examination to whoever wishes it; the latter, biannually for sums of £500 and over. (The "Prudential" does not grant examinations, but helps those who have to be operated on, by granting them, free of interest, loans up to ninety guineas to every £1,000 for operations and nursing which, though not furthering early diagnosis, helps in the fight against disease.)

In Germany periodic health examinations began in 1925. At present there are seventeen companies that give their policy holders of sums varying between £150 to £500 (par) free health examinations triannually. Besides this, they are educating their public by means of illustrated journals, urging them to pay a timely visit to the doctor and to learn the early signs of disease, where this is important for a successful cure. They have created a popular film, "Don't Leave it to Chance," which promulgates the idea of the necessity of early diagnosis, and have organized a health service centre, the *Deutsche Zentrale für Gesundheitsdienst der Lebensversicherung*. In Switzerland the "Vita" has inaugurated such health service, and is offering it also in other countries (Belgium, Holland, Spain, France) where it has branches; the example has been followed by two more companies in Switzerland. In Austria the "Phoenix" does this kind of work; in Italy, in great style, the *Istituto Nazionale delle Assicurazioni*. Japan also has made great progress in this line. In South Africa the "South African Liberal," and in Dutch India six companies, have taken up periodic health examinations, but only one company in Holland itself.

Those who are interested in the matter may find details in my article in the *Blätter des Roten Kreuzes* (February, 1928). It will be seen that there is room for improvement along these lines in regard to, and independently of, the question of life insurance. Dr. Roy Ward makes clear

the importance of drawing attention to the institution of periodic health examinations as such, which, as the insurance companies have recognized in the first instance, are one of the most important means not only of combating cancer, but in aiding preventive medicine. May I be allowed to associate myself with his views?—I am, etc.,

OTTO NEUSTÄTTER.
Scientific Director of the Deutsche Zentrale für Gesundheitsdienst der Lebenversicherung.

Berlin, Schlachtensee, May 29th.

The Method of Medical Care

SIR,—As one who may have earned the right to claim that he understands the difference "between sociology and socialism," may I express my congratulation upon your editorial in the *British Medical Journal* of April 7th, 1934? This clear and courageous statement will, I am sure, contribute to substantial progress in the United States.

Your editorial quite correctly recognizes that the anti-social stand of certain officers of the American Medical Association has latterly rested its case almost entirely upon the allegation that national health insurance in Great Britain has been a colossal failure, whether judged by public or by professional standards. The American medical profession has been almost persuaded that the British medical profession was opposed to national health insurance, or accepted it only on sufferance. If I may be permitted a colloquialism, your editorial, coming hard upon the heels of Sir Henry Brackenbury's article in the *New England Journal of Medicine*, and upon the publication of the report of the special commission of the Michigan State Medical Society, will "spike the guns" of this campaign of misrepresentation.—I am, etc.,

I. S. FALK,
Milbank Memorial Fund, Division of Public Health Activities.

40, Wall Street, New York, May 16th.

Incidence of Cancer

SIR,—In a letter in your issue of May 26th (p. 963) your reviewer quotes from *Recent Advances in Pathology* figures the apparent meaning of which is that cancer of the lung has become much more common in recent years. He can only have seen the first edition of our book, since in the present one we also refer extensively to the statistical research of Professor Passey, whose conclusion is that the apparent increase in the incidence of lung cancer is due to improved methods and facilities for diagnosis. A striking fact which emerges from Professor Passey's analysis is that the increased incidence of the disease reported in this country is confined to hospitals at which there is a tuberculosis dispensary. In view of Professor Passey's findings we do not wish to be regarded and quoted as advocates of the belief that lung cancer is becoming more common, and we shall therefore be grateful if you will publish this qualification to your reviewer's statement.—We are, etc.,

G. HADFIELD.
LAWRENCE P. GARROD.

May 31st.

SIR,—May I do my best to answer Mr. Duncan Fitzwilliams's very pertinent question in the *Journal* of June 2nd (p. 1004)?

Although it is true that we have no reliable statistics of the extent to which primitive African or other civilized communities suffer from cancer, I doubt whether they would satisfy the statisticians even if we could obtain them. Differences in race, in colour, in evolutionary position, in customs, etc., would introduce so many factors other than those due to civilization, or lack of civilization, that for the purpose of comparison they could hardly be so reliable as those which show the proportion of cancer suffered by the same civilized nation for a sufficiently long period of its history. And what could better answer the purpose than those statistics which have now been collected in our own country since the beginning of this century? During this generation the progress in material civilization has been so rapid that we should be well within the mark in estimating that it is equal to that made during the previous one hundred years. The figures are also not those of cancer in its early stages, such as might show a spurious increase due to improvements in diagnosis, but of cancers in their most pronounced forms, so pronounced, indeed, as to have caused death. The increase, moreover, is not a trifle, easily to be argued away, but is so considerable that it points to the conclusion that during the last thirty-three years of our intensive civilization cancer has almost doubled in frequency, in spite of the many thousands of lives which have been saved by better methods of treatment.

I fully agree with my reviewer that we ought not to blame civilization for this appalling increase in cancer, but some fault in our own particular brand of civilization. In the last century civilization brought with it a rising death rate from cholera, enteric fever, tuberculosis, and other diseases of insanitation. But these we now know were not directly due to civilization, but to faulty ways of living—to insanitation. And when civilization had advanced a little further, and the mistakes were corrected, the disorders due to them were either wiped out or are being wiped out.

After the same fashion it may reasonably be assumed that cancer is not a disease either of normal old age or of normal civilization, but of some error which now accompanies both of these conditions.

Doubtless I am running considerably in advance of my subject when I venture to predict that the fault of civilization which is to cancer what insanitation was to cholera and enteric fever, is abnormal degeneration. The Victorian oncologists were of the opinion that cancer is essentially a disease of degeneration, and I suppose this view is still held. But what the degenerating circumstances are, how they act, and in what way they can be prevented—or, in other words, how further civilization will enable us to get rid of them—can hardly be entered into here.

I must apologize to Mr. Duncan Fitzwilliams for the much too didactic turn which this reply to his letter has taken. My excuse is that it is his own fault, for it is provoked by the generous and kindly words in the opening sentences of his letter.—I am, etc.,

HASTINGS GILFORD.

Reading, June 4th.

Memorial to Dr. Haig Ferguson

SIR,—Some friends of the late Dr. Haig Ferguson feel that a proposal to have a permanent memorial to his life and work will meet with a ready and general acceptance—indeed, they believe, with an instant, glad, and even eager response, for it is not given to many men to hold the place Dr. Haig Ferguson won for himself by the force of his personality.

The chivalrous courtesy and unvarying kindness shown to everyone he had to deal with, in whatever rank or class they were, endeared him to the whole community. His skill in his own particular department of medicine, while making him the channel of incalculable benefit to his patients and their families, won for him the respect

and honour of the whole medical profession in Edinburgh and far beyond. And in another direction, less well known because of the essential modesty of the man, he has, as a wise and far-seeing philanthropist, influenced and helped many hundreds of needy girls at perhaps the most critical period of their lives. It is in this last characteristic that we see the possibility of founding such a memorial to Dr. Haig Ferguson as would be not only fitting and worthy, but would seem to be nearer to his heart than any other that could be projected.

For over forty years Dr. Haig Ferguson identified himself with the fortunes and work of the Lauriston Home—a home for unmarried mothers (first cases) where both pre-natal and post-natal care are provided, and where also, apart from those medical necessities, a refuge is afforded to those who are often in the extreme of misery, all the more intolerable in that it is mental rather than physical. The Lauriston Home is lineally descended from the St. Luke's Home which the late Sir John Halliday Croom founded some forty-five or fifty years ago. For the last thirty years at least Dr. Haig Ferguson was its moving spirit, and was in constant and intimate association with its work up to the time of his death. It may be said that of the many philanthropic activities with which his name was associated there was none which he had so completely at heart. The institution has a somewhat precarious existence, being entirely dependent upon the slender payments of the inmates, along with such subscriptions as a rather restricted circle of friends contribute; those last, being mainly due to the personal influence of Dr. Haig Ferguson, will now tend to cease.

If a sum of £5,000 could be raised the home could be placed on a lasting and permanent basis, and, as the "Haig Ferguson Memorial Home," would perpetuate the memory of a great and good man, while at the same time affording shelter to that class of unfortunate inarticulate people which was ever the object of his understanding and pitying solicitude. We commend this appeal to the personal and generous consideration of your readers in the belief that they will welcome the opportunity. Donations should be sent to R. H. Wallace Williamson, Esq., C.A., 37, Melville Street, Edinburgh.—We are, etc.,

R. W. JOHNSTONE,
Chairman.
A. E. LAURIE,
Vice-Chairman.
ALISON RICHARDSON,
MURIEL A. NIMMO SMITH,
Joint Hon. Secretaries.
F. C. NIMMO SMITH,
Appeal Secretary.

Edinburgh, May 31st.

Strangulated Hernia

SIR,—Mr. Wood Power (May 26th, p. 964) pertinently asks in what percentage of cases I can carry out the injection treatment of hernia, and what are the percentages of cures and failures. Any *oblique* inguinal hernia that is *completely* reducible is suitable for this method of treatment. Size is no contraindication.

The results of cases where treatment has been completed are as follows: Total, 57—cured, 44; failures, 12; untraced, 1. This gives a percentage of cure of 77, but it must be taken into account that of my twelve failures four were direct hernias, and in one of these the bladder was incorporated in the neck of the sac; in two cases there were adhesions near the neck of the sac preventing complete reduction, as proved by subsequent events; one patient had had many previous operations, and his abdominal musculature was not good (however, he feels that his condition is considerably improved); in one case there was an enormous recurrence after an operation, and the neck of the sac was practically as wide as the whole inguinal canal, so that it may be called direct. This accounts for eight of the failures. Of the remaining four, two received an insufficient number of injections—that is, the technique was faulty—and one of the other failures I strongly suspect has adhesions near the neck; the remaining patient wrote, in answer to my inquiry a short while ago, that he has had a recurrence on one side.

I therefore anticipate that by declining to treat cases of direct hernia, and those in which there is any suspicion whatever of adhesions near the neck, I shall effect a very considerable improvement in my percentage of cures in the future.—I am, etc.,

London, W.1, June 3rd. ST. GEORGE B. DELISLE GRAY.

Criticism of Ante-natal Work

SIR,—Though I am but a general practitioner I feel that the substance of the lecture entitled "A Criticism of Ante-natal Work" (May 19th) ought not to go uncriticized, for the impression which it leaves on one's mind is that it vastly overstresses the dangers of induction, without due regard to its advantages.

In dealing with the question of induction, and of its safety or otherwise, surely one must take into consideration the stage at which it is performed. Though there can be no doubt that at the thirty-second week there must be danger to the child, I believe that induction at a fortnight, three weeks, or occasionally a month before term often makes all the difference between a long second stage with instrumental delivery and a reasonably safe normal labour. This I have done fairly often, and I think my figures support this statement, for it is common knowledge that the foetus is capable of growing disconcertingly during the last few weeks. Moreover, I have so far found that infants thus induced seem to progress as well as any others, at any rate while in hospital; and my opinion is that, provided the foetus "feels" a five- or six-pounder, there is little danger so far as prematurity is concerned.

I have under my care a small lying-in hospital where, during the last three years, we have had 777 cases—499 of which were primiparae and 278 multiparae. At this hospital I superintend and perform ante-natal work and any inductions I think fit, and in cases of difficulty during labour or the puerperium am called upon. Thus it is seen that there is continuity of treatment from start to finish. Of these 777 cases I have induced 127, twenty-nine of which had bougies inserted, the remainder having quinine; 109 were induced for "disproportion," post-maturity, or similar reason; ten for albuminuria; and eight for breech presentation.

This must seem an appalling proportion, but in these inductions there were only six stillbirths, of which five were probably due to causes other than induction. Two were forceps cases and one was post-mature: these made me wish I had induced earlier. One was a breech presentation with albuminuria, and yet another had albuminuria. There were, then, at the most, two in which induction could possibly be considered the causal factor. In only one of the bougie inductions was there any pyrexia, and that only the most transient. I feel that no criticism of the stillbirth rate in induction cases is fair unless it is compared with a parallel series of forceps cases, for surely one of the objects is to transform a potential instrumental labour into a normal one.

Of these 777 cases there were only twenty-seven forceps cases, which I am convinced is a lower rate than that which usually pertains, and I am sure that the high induction rate has saved many an instrumental labour. It is, moreover, instructive to see that among these twenty-seven forceps cases there were six stillbirths, and I feel sure that the dangers to the child are infinitely

greater from the use of forceps than from induction—let alone the dangers to the mother. In regard to breech presentations, should the foetus not be *persuaded* to turn, my policy is to observe its growth, and if in any doubt about the size of the head then to induce. This, I think, is better than the use of force under an anaesthetic. I must admit that compared with the lecturer's statistics my figures are small indeed, but they do represent one's personal work and experience, and I hope may be of some help in this difficult problem.—I am, etc.,

Manchester, May 25th. C. VIPONT BROWN, M.B., Ch.B.

Osteopathy

SIR,—Dr. Dorothy Wood's letter (June 2nd, p. 1009) greatly interested me. She describes understandingly the underlying pathology on which osteopathy is based. "Spinal displacements . . . are, in the main, static fixations of articulations which have been carried beyond the normal range of movement, and held in abnormal positions by the sustained unequal tension of ligaments, muscles, and surrounding soft tissues." Further on she states: "Owing to the highly cultivated tactile sense, which can only be developed by years of special training, the osteopath is able to detect these fine deviations from the normal, vertebral or otherwise, which are usually not apparent to the surgeon."

It is her assertion of this very highly developed technique of spinal manipulation, only possessed by the initiated, which arrested by attention, for not long ago one of my patients was treated by an osteopath for twenty weeks, and as I was anxious to know what the treatment consisted of I questioned and cross-questioned the lady at some length. One of course does not always believe the stories of patients, but in this particular case I believe the story to be true. The osteopath she consulted was the genuine article from the Middle West—not a mere native imitator of occidental healing.

The procedure was as follows. The patient stripped to the waist in an ante-room, and then was ushered into the presence of the osteopath, who "rubbed" her spine for about a quarter of an hour (of course this "rubbing"—the patient's own words—may be the manipulation of the spine by the highly cultivated tactile sense of the osteopath). After the "rubbing" was over she was sent into another room, still stripped, and was exposed for another fifteen minutes to the rays of a violet lamp. She then dressed, deposited her guinea, and left, to return week by week. As she did not seem to make much progress the osteopath applied tonsil suction (evidently the osteopath was trying to see if draining the tonsils would produce more effective results).

Her friends who had recommended the osteopath inquired as to her progress. She replied that she was no better. "Wait until he gets on your back," was their assurance. At the next visit he got on her back. She lay on a couch face downwards, and the osteopath got astride of the patient and pressed firmly with both hands on the lumbar vertebrae, causing considerable pain. After this experience of the "highly cultivated tactile sense" she did not return. She is still alive and well—an osteopathic cure!—I am, etc.,

Warrington, June 3rd. J. S. MANSON.

SIR,—Dr. Dorothy Wood, in her reply to Mr. Bankart's article on osteopathy, makes some alarming statements. In regard to the spinal "displacements" to which she refers, may I ask her why these cannot be demonstrated radiologically? How does she defend the common practice of a patient attending an osteopath regularly once a week to have a "bone put back in the spine"? Such patients abound at orthopaedic hospitals—after they have been relieved of their money, but not of their disability. If Dr. Wood wishes, I can easily give her ample proof of the above statement.

Allow me to mention just three cases I have seen during the last few days which disprove Dr. Wood's contention that osteopathic principles are based on sound pathology.

1. Internal derangement of the knee-joint. "Bone put back" by osteopath, who advised the patient that he must "avoid getting water on the knee." Result—the knee-joint again became deranged on the homeward journey. Osteopath refused to see him.
2. Typical chronic tenosynovitis of the flexor tendons of wrist. "Bone put back," with no relief of symptoms.
3. Tuberculous shoulder-joint, with cold abscess on the arm. Manipulated by osteopath.

As regards the so-called "highly cultivated tactile sense" which osteopaths possess and surgeons do not, this is surely a doubtful advantage when it leads them so often to find displacements which are not present and to overlook such diseases as tuberculosis and cancer which are.—I am, etc.,

Hove, Sussex, June 4th. J. M. TURNER, F.R.C.S.

The Medical Charities

SIR,—I hope that Dr. Arnold Gregory's letter (May 26th, p. 962) on the matter of the medical charities will be read by all members of the Association; it sums up the present situation, and gives some indication as to what is required to improve the state of affairs.

A letter such as Dr. Gregory's should be quite unnecessary; special charity weeks should be unnecessary; all the usual methods we now employ to gather together a few pounds for the charities should be unnecessary. It should be the wish and duty of every man and woman in the profession to impose a tax on his own earnings so that he may subscribe towards the relief of his colleagues or his late colleagues' dependants. There must be very few practising men who cannot afford to make at least one donation to the funds of the charities; many of these could well afford a small annual subscription. I feel that we should now aim at making a levy on the members of the profession in order to raise the capital sum mentioned by Dr. Gregory: 50,000 practitioners of medicine ought to be able to give one guinea each towards this sum. In addition, a similar sum ought to be raised every year by annual subscription. A levy and compulsory subscription should cause no hardship at all, and would render quite unnecessary all the special functions and all the campaignings of the various organizations at present in the field (all clamouring for subscriptions, all overlapping in their appeals, all quite inadequately supported).

The experience of charities secretaries in most Divisions is that letter and personal canvass will produce nothing further; the average medical man seems to be somewhat apathetic and unconcerned when the matter of charities crops up. More than once I have been told by a practitioner that no man ought to be "so down and out" that he cannot make provision for his family; but because he himself is "too hard up" I have not succeeded in extracting a subscription. However, until the ideal can be attained, we must make special efforts on the lines suggested by Dr. Gregory. I would suggest that the first move should be towards reconstitution of the Central Charities Committee of the Association. There ought to be more direct representation of the Divisional charities secretaries (who are the fellows who do the donkey work): this committee should co-opt representa-

tives from all the charities, and also any hard-working men and women whose services may be useful. The next step should be the organization, by the committee, of a conference of all B.M.A. charities secretaries, local Royal Medical Benevolent Fund secretaries, Epsom College local secretaries, Ladies' Guild secretaries, and so on. At this conference the whole matter of medical benevolence could be reviewed, a committee formed to draw up a new scheme, and a general stimulus given to the profession to look to its dependants.

I would suggest that as the Annual Meeting of the B.M.A. will not be held in England in 1935 it would be very convenient to have the first conference of charities secretaries next year. If the conference is to do any good work it must be unhampered by other business: we want no more fiascos like that at the Eastbourne Meeting in 1931.—I am, etc.,

RAYMOND H. ROBINSON,
Charities Secretary, Torquay Division, B.M.A.;
Local Secretary, Epsom College.

Torquay, May 28th.

Scottish Medical Golfing Society

SIR,—Will you kindly grant us space in your columns to announce the birth of the Scottish Medical Golfing Society. On April 30th, 1934, a meeting was held at the Langham Hotel for the purpose of giving concrete form to a common desire that Scottish members of the medical profession in the London area should meet occasionally throughout each year for the express purpose of vying with one another in propelling the golf ball from tee to hole, according to the rules of golf. The various offices were created, and the following were filled:

President.—Bertram Shires.
Vice-Presidents.—Sir Ashley Mackintosh (Aberdeen), Sir Robert Muir (Glasgow), Professor Musgrove (St. Andrews), and Sir Harold Stiles (Edinburgh).
Honorary Treasurer.—Bruce Williamson.
Honorary Secretaries.—Norman Fleming and Burton Yule.
Councillors.—A. Landale Clark, A. K. Forbes, D. McKenzie, D. J. MacMyn, J. W. Skelley, and L. E. Barrington Ward.

An entrance fee of one guinea and an annual subscription of one guinea will be due from all members of the society, the subscription being paid by a standing banker's order so long as membership of the society is held. Doctors who are interested are requested to apply for membership to the undersigned, stating their qualifications for the above society, also club and handicap.—I am, etc.,

92, Harley Street, W.1, June 2nd. NORMAN FLEMING.

Poisoning by Ground Ivy

SIR,—The plant I referred to is the "ground ivy" of all our herbals and botany books going back to the middle of the sixteenth century. It is a labiate and not a *Hedera*. The ordinary *Hedera* climbing ivy often has a creeping ground habit. In some respects it is a remarkable plant. When grown on a tall wall the upper part takes on quite a different appearance from that of the lower. The late Harrison Weir, the artist, showed me a stout-looking shrub in his garden. When I asked him what it was, he replied, "Ivy off the wall." He had cut down the upper three or four feet from the main stem and planted it. It took, and grew into a big bush. Common "wall" ivy is not poisonous, as sheep will eat it freely, and walls when covered by the plant have to be fenced to keep them off. I have made inquiries as to what "ground" ivy contains in a pharmaceutical way. Beyond an aromatic oil of no great strength, the answer is "Practically nothing." I wonder if the infusion contains a sufficiency of gum to protect the skin from the air or the clothing, or whether the gum plus the oil gives the relief. At any rate, the infusion works, and as a help in these miserable cases of prurigo it is worth a trial. I used the fresh plant, but a herbalist, writing to me, indicates that the dried plant is also useful. This is the best time to gather it—when in bloom and full of juice.—I am, etc.,

Appledore, Kent, June 3rd. F. WILLIAM COCK.

Tests for Drunkenness

SIR,—After all these years of doubt it is indeed a relief to find that medical men, especially police surgeons, have had removed from their minds, by a recent decision, the anxiety invariably caused by a police call to a case of "Drunk in charge of a car." I admit it has taken much time and thought to arrive at a satisfactory conclusion. Cases are apparently now divided into two groups: (1) the one in which the person implicated declines to be examined, and, the act of forcible examination being a trespass vetoing any test, the solicitor is in the happy position of demanding an acquittal on the ground that no tests were employed; (2) the other in which the fact that the implicated person asked for an examination is to be accepted as a clear proof that he is sober. All most satisfactory to the accused and to the medical man.—I am, etc.,

June 4th. J.P. POLICE SURGEON.

Obituary

E. E. BOWDEN, M.R.C.S., L.S.A.

Consulting Surgeon, Warrington Infirmary

On Sunday, June 3rd, Warrington lost her oldest practitioner by the death of Dr. E. E. Bowden. He had been in poor health since last autumn, and was confined to bed for the last five months. He was born at Patricroft, near Manchester, on September 9th, 1862, and had been associated with Warrington for forty-seven years. He was appointed junior house-surgeon at the Warrington Infirmary immediately after qualifying as M.R.C.S. and L.S.A. in 1887, and continued in residence there as senior for nine years. He commenced in general practice at Warrington in 1896, and held numerous appointments: Post Office, factory surgeon, medical officer to the Training College until its removal to Liverpool, police surgeon, and surgeon to the Warrington Infirmary for twenty-five years, retiring in 1922, when he was presented with a testimonial from the board of management. During the war he was chairman of the Recruiting Medical Board, and acting D.C.M.S. of the Ministry of National Service and Ministry of Pensions. He was also medical referee for the Warrington, Leigh, Altrincham, and Wilmslow county courts.

Dr. Bowden joined the British Medical Association in 1888. He was a member of the Manchester Pathological Society, the Royal Institute of Public Health, and the Society of Members of the Royal College of Surgeons. He was chairman and secretary of the old Warrington Medico-Ethical Society, now defunct. He was the first chairman of the Warrington Panel Committee, and also chairman of the Warrington Division of the British Medical Association, to which he was always loyal. This record shows that he had a variety of interests associated with the practice of medicine, and all his work was accurate, painstaking, and thorough, and much appreciated by the higher authorities whom he served. Behind a stern and somewhat brusque manner he hid a kindly and sympathetic heart, and his familiar figure will long be missed

in the homes and numerous factories and workshops of Warrington. He leaves a widow and two sons, one of whom is a member of the medical profession.

J. S. M.

THE LATE DR. WILLIAM B. PATERSON

Sir James Barr writes: I am very sorry to learn of the death of Dr. W. B. Paterson from the excellent obituary notice by Dr. Robert Coope in the *Journal* of June 2nd. I owed many obligations, professional and personal, to Dr. Paterson, whom I always held in the highest esteem, and patients might trust their lives with confidence to him. I have a lively recollection of one night when getting off a tram-car the driver failed to stop and my right humerus was dragged out of its socket. I was assisted home. A surgical colleague was telephoned for, but he was at an operation and could not come for at least half an hour. A practitioner friend was obtained, but he had no anaesthetic. He laid me on the floor, and with his foot in my axilla he pulled for a considerable time, but, contrary to my expressed wish, he gave up the job as hopeless and went home for chloroform. I told my wife that I could not lie in agony till his return and asked her to ring up Paterson and tell him to bring chloroform with him. He arrived almost immediately fully armed and I asked him to put me under chloroform and keep me deeply under till the dislocation was reduced. I woke up comfortably in bed. The following day the surgeon and my other friends insisted on giving me a dose of tetanus antitoxin. My recovery from the accident took about six months. I very much regret that I did not hear of Paterson's illness when I was in Liverpool about nine months ago. The medical mortality in Liverpool of late has been somewhat appalling, and I am now very sorry to find Paterson added to the list. I wish to extend my sincere sympathy to Mrs. Paterson.

Dr. JOHN MYLES of Dolgelley was born in Limerick in 1855, and received his medical education at Trinity College, Dublin. Before this he had spent many years in Australia and New Zealand, and served in the New Zealand Artillery in the second Maori War. He graduated M.B., B.Ch.Dublin in 1889, and obtained the F.R.C.S.I. in the same year. In 1894 he proceeded M.D. After graduation he returned to New Zealand, engaged in private practice at Kumara, and was appointed medical superintendent of the Ross and Kumara hospitals. Five years later he came to England, living in Clapham, eventually removing to Dolgelley, where he had practised for twenty-seven years. At the outbreak of the Great War, although over military age, he obtained a commission as Captain R.A.M.C., and was medical officer to the Caerynwch Auxiliary War Hospital. Dr. Myles took an active part in the formation of the Dolgelley branch of the British Legion, and in recognition of his services in this connexion was awarded the gold badge of the Legion. He had been a member of the British Medical Association since 1897. A great athlete in his youth—he was an Irish Rugby international in 1875, and at about the same time was in the crew at Henley which won the Ladies' Plate—he carried with him through his life a zest for active pursuits and a great love for his fellow men. Wide in his reading as in his travels, he was a man of broad outlook, and a welcome member of many social organizations. His geniality and exceptional talent for making friends endeared him to his colleagues and patients, and at his funeral Dolgelley Parish Church was crowded with representatives of the many interests he had espoused in a long life of devoted service.

The following well-known foreign medical men have recently died: Dr. CHRISTIAN ZOELLER, professor of epidemiology and bacteriology at the Val-de Grâce School of Medicine, Paris, aged 46; Dr. CHEDA MIHAILOVITCH, formerly Minister of Health at Belgrade, aged 64, from anthrax; and Professor ARTHUR HÜBNER, director of the Nerve Clinic at Bonn, aged 55.

Medico-Legal

BUSINESS RELATIONS BETWEEN DOCTORS

This is the first of a series of articles, contributed by a legal correspondent, on some practical aspects of business transactions between medical practitioners.

GENERAL CONSIDERATIONS

When a doctor buys or sells a practice, or takes a partner, an assistant, or a locumtenent, or enters the employment of another as an assistant or locumtenent, he creates, whether he realizes it or not, a legal relationship which is bound by legal rules. Unfortunately, the experience of the large defence societies, of the British Medical Association, and of those solicitors and agents who are accustomed to these transactions shows that doctors are lamentably careless in their dealings with one another. Men who take the most scrupulous care of their patients may display in their business relationships an indifference which if carried into their professional life would quickly expose them to a charge of manslaughter. The reason for this widespread failing may be a large generosity of mind, which assumes that other persons are honest and will carry out their intentions and obligations loyally, and which cannot see the necessity for legal compulsion. It may be a preoccupation with the needs of sick bodies and minds, and an impatience with intellectual abstractions which seem to have no practical value. But the fact remains that solicitors who specialize in medico-legal work are constantly being called in to unravel the complicated and acrimonious problems that arise when two or more medical men, in addition possibly to a number of lay relatives, have involved themselves in a financial and professional relationship of vital importance to all concerned, have based years of their working lives and hundreds of pounds of their savings on it, and then, when the situation is transformed by a quarrel or a death, find that their intentions have never been clearly stated and agreed, and that they all hold completely different and antagonistic views about the rights and duties of each party to the arrangement.

The purpose of this paper is therefore twofold: to persuade the medical practitioner how important it is to conduct his business relationships with his fellows in the proper legal way, and to show him something of the law governing these relationships. It is impossible to avoid giving a certain amount of general advice as distinguished from legal information, but this tendency has been resisted as far as has been practicable. The material is not by any means original. For practically all of it the author is indebted to the classical textbook of Barnard and Stocker, the earlier chapters of *The Conduct of Medical Practice*, various articles and letters that have appeared from time to time in the *British Medical Journal* and the *Lancet*, and the more recent annual reports of the two great professional defence societies.

The chief business relationships between doctors are those of partnership, of a principal with his assistant or locumtenent, and of a doctor selling his practice with the doctor who buys it. These relationships have several features in common. He who buys part of a practice is at once a purchaser and a prospective partner, so his relationship with the vendor—the technical term for a party who is selling something—is a double one. A doctor sometimes becomes an assistant with a view to becoming a partner later on; or under terms, such as a small share in the profits in addition to his salary, which make his position difficult to distinguish from that of a partner. A locumtenent's position is much like that of an assistant, but as it is transitory it does not involve much provision for the future.

INTANGIBLE ASSETS

Business relationships between doctors, and indeed between other professional persons, have one notable feature which distinguishes them from those between commercial or financial persons. A commercial or financial business usually involves a good deal of tangible property, such as land, buildings, or money. A medical practice rarely has any property attached to it, but consists almost entirely of the intangible factor known as goodwill—that is, the readiness of patients to consult the owner of the practice. The value of a practice is the value of its goodwill, an important ingredient of which is the number of patients and the size of the fees they pay. For this reason a doctor who buys a practice or a share in one can never know, despite the most skilled and careful investigation, quite what he is getting. The purchase price is calculated on the gross receipts, but the real value of the practice will depend to an overwhelming extent on subtle factors like the completeness of the introduction, the willingness of patients to transfer to a stranger, and the extent to which they like the newcomer personally. Similarly, the value of a share will depend largely on the manner in which the established partner behaves after the agreement is signed and joint work is started: whether he is loyal or obstructive; whether he works or slacks. A former owner or assistant who sets up practice in the neighbourhood may draw off a large number of the patients and reduce the value of the goodwill disastrously.

The only tangible property included in the practice will, as a rule, be a few medical stores and some stationery, for if a house or surgery goes with the practice it is usually much more convenient to transfer the legal interest in it by a separate transaction with separate documents. A new practice is therefore as intangible and abstract a chattel as it is possible to buy, sell, or share. It is practically true to say that the purchaser takes, and the vendor sells, a potential interest in a number of psychological complexes belonging to various persons domiciled in the neighbourhood who are not concerned in the contract. The essentially abstract nature of a practice, considered as a valuable thing, dominates all business transactions connected with it. The one question that is ever present may be put thus: "What effect is this change, this conduct, going to have upon the feelings of the patients?"

The law, though no stranger to the concept of goodwill, is not very closely adapted to business relationships between medical men. It is chiefly framed for commercial partnerships and agency and the transfer of tangible property, and its concepts are sometimes difficult to apply to professional transactions. For instance, when a partner dies, his executors cannot claim anything for his estate in respect of his share of the goodwill. It is not legally a partnership asset for purposes of valuation, although the firm may own nothing else. It is practically impossible to confine within legally intelligible propositions the subtle mental factors which are so vitally important in medical relationships. The capacity of the law and legal agreements to control these transactions is much less than in commercial relationships, and their success depends far more on the personal and professional integrity of the parties.

IMPORTANCE OF A LEGAL AGREEMENT

Nevertheless, the fact that the scope of the law is especially limited in medical relationships does not make the law any less important within that scope, but rather more. Medical men are always tempted, and very often succumb to the temptation, to say: "We are both men of honour and know what we want; why should we bind ourselves with a legal agreement? Surely we can each trust the other to do his duty without this compulsion. Why should we pay a lawyer a fee to type out in complicated language what we can express simply?" Some doctors put nothing in writing at all; a few others, with more sense, put their bargain in writing and exchange signed copies. Both groups, however, are risking grave trouble, for many reasons. The first and most obvious risk is that one or both will turn out deliberately dishonest. The second is that, with the best intentions in the world, they will disagree on what they really meant. If the bargain has never been put into writing, this development is not only probable but almost certain. Even if the terms have been written down, there is ample room for difference on their interpretation.

The third risk is that one of the parties will die and that his personal representatives, inquiring into his interest in the practice, will find absolutely no record of its limitations. When a disagreement of this kind develops there is often nothing to be done but to call in a lawyer with experience in medical relationships to sort it out. Contracts for the transfer of a practice for partnership or for assistantship are valid even though they are not expressed in writing. A contract exists, but its terms can only be deduced from the conflicting evidence of the parties, one of whom may be dead, and of persons who may have been in close enough contact with them to know what they intended; and from the behaviour of the parties—the way in which they carried on the business. Even when the parties are friendly and anxious to reach a settlement, this process is tedious and unsatisfactory; when they are hostile it may involve a lawsuit in the Chancery Division costing hundreds of pounds. In any event the whole trouble could have been avoided altogether by consulting an experienced solicitor before entering into the relationship and having the bargain expressed in proper legal form, which, whatever the contracting parties may forget or misunderstand afterwards, will always convey a definite and unequivocal meaning to a lawyer.

The following is a typical example, reported by a defence society, of the evil consequences of neglecting to have a legal agreement drawn up.

> Two doctors fell out over an agreement to transfer a practice on the Continent. The question at issue was whether a definite contract had been made. As both parties had approved the terms but the agreement had not been signed, various legal difficulties were introduced. Fortunately both were members of the same defence society, and the dispute was settled by the society's solicitors, but the practitioners would have saved themselves and their society much trouble if they had employed the solicitors to keep them from making a muddle instead of to get them out of it.

Moreover, this work should always be entrusted to a firm with special medical experience. With great respect to the members of an admirable and indispensable profession, not all, and probably not many, solicitors are so familiar with medical practice and partnership as to be able to draw up an agreement which will avoid the many traps which lie open to the stranger.

In the annual report of the Paddington Houses Association Ltd. it is stated that during last winter cooking demonstrations were arranged for the tenants of houses belonging to that body. These were based to some extent on the report of the British Medical Association on the necessary minimum weekly expenditure on food per family, and weekly menus were drawn up in accordance with it. It was found that this standard of nutrition was above what could be afforded by many in one of the areas. The material for use in these classes was obtained from local shops. Emphasis is laid on the economies resulting from the wise use of gas in cookery and the planning of meals days ahead, as well as on the value of milk and cheese for children. The Paddington Houses Association now owns eighty-five houses, all free of mortgages. It houses 322 families, comprising about 1,365 persons. Owing to shortage of cheap accommodation in the vicinity it is still compelled to allow a larger number of persons per room than is desirable. Close co-operation is maintained with the borough council in its work against overcrowding.

Universities and Colleges

UNIVERSITY OF OXFORD

At a congregation held on June 2nd the degree of Doctor of Medicine (D.M.) was conferred on K. N. Irvine.

UNIVERSITY OF LONDON

Dr. G. R. Cameron and Dr. L. P. Garrod have been assigned to the Faculty of Medicine.

Mr. N. J. Ainsworth, M.R.C.S., L.D.S., has been recognized as a teacher of dental surgery at the Royal Dental Hospital of London, School of Dental Surgery, and assigned to the Faculty of Medicine.

Professor H. S. Raper, D.Sc., M.B., F.R.S., has been appointed as an additional external examiner on the Board of Examiners for the Diploma in Biology in 1934.

The Regulations for the Academic Post-Graduate Diploma in Medical Radiology (*Red Book*, 1933–4) have been amended as follows: (1) By the addition of the following after the seventh paragraph on page 497:

"Students who have passed the B.Sc. (Special) Examination in Physics as Internal Students of this University will be exempted from the course of study and examination for Part I of the Diploma.

"Students who have passed the B.Sc. (General) Examination in Physics or the B.Sc. (Special) Examination with Physics as their subsidiary subject as Internal Students of this University will be exempted from the course of study for Part I of the Diploma."

(2) By the deletion of the tenth, eleventh, and thirteenth paragraphs on pages 497–8 and the substitution therefor of the following:

"Part I of the Examination will be held twice in each year, beginning on the Tuesday following the third Monday in March and on the first Monday in December.

"Part II of the Examination will be held twice in each year, beginning on the third Monday in June and on the second Monday in December.

"Every student entering for either or both parts of the Examination must apply to the Academic Registrar for an entry form and a certificate of course of study, which must be returned duly filled in and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than February 8th for the March Examination, April 8th for the June Examination, or November 8th for the December Examination.

The following appointments have been made: Professor G. E. Gask, F.R.C.S., and Mr. H. L. Eason, M.S., F.R.C.S., as Governors of the British Post-Graduate Medical School; Sir Cooper Perry, M.D., as representative on the governing bodies of the National Training College of Domestic Subjects and the Battersea Polytechnic; and Dr. H. G. Cook, F.R.C.S. (reappointed), to act as representative on the Court of Governors of the University College of South Wales and Monmouthshire for a further period of five years as from October.

Applications for the William Julius Mickle Fellowship must be sent in by October 1st. The Fellowship is of the value of at least £200, and is awarded annually by the Senate to the man or woman who, being resident in London and a graduate of the University, has in its opinion done most to advance medical art or science within the preceding five years, and has therein shown conspicuous merit. Further particulars may be obtained on application to the Academic Registrar.

Provided there is a candidate of sufficient merit, a Paul Philip Reitlinger Prize of £30 will be awarded on December 3rd for the best essay embodying the result of some research work on a medical subject carried out by the candidates, who must be matriculated students who, on June 1st preceding the award, were studying in one of the schools of the University in the Faculty of Medicine, or graduates of the University who on the same date were of not more than five years' standing from the taking of the first degree, and are or were students of such school. Essays must reach the University by October 1st, and regulations for the award of the prize may be obtained from the Academic Registrar.

UNIVERSITY OF WALES

The following candidates have satisfied the examiners in the examination indicated:

TUBERCULOUS DISEASES DIPLOMA.—P. K. Ghosh, B. K. Pal, H. K. B. Rustogi, P. K. Sen, H. A. Zaki.

SOCIETY OF APOTHECARIES OF LONDON

The following candidate has been approved at the examination indicated:

MASTER OF MIDWIFERY.—Marjorie Houghton James, M.B., B.S., D.P.H.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

At the monthly meeting held on June 1st a resolution was adopted in silence expressing regret at the death of Dr. John Hugh Robert Glenn, a Fellow of the College.

The following were admitted Licentiates and Members of the College: W. R. F. Collis, M. J. O'Donnell, R. B. Pringle, and T. F. M. Woods.

The Services

DEPUTY DIRECTOR-GENERAL, A.M.S.

The War Office announces that Colonel W. P. MacArthur, D.S.O., O.B.E., M.D., F.R.C.P.I., Honorary Physician to the King, who is at present consulting physician to the Army and professor of tropical medicine at the Royal Army Medical College, has been appointed Deputy Director-General, Army Medical Services, the War Office, with effect from September 16th, in succession to Colonel F. D. G. Howell, D.S.O., *M.C.*, Honorary Surgeon to the King, who, on completion of his temporary tenure of the appointment, will proceed to India to take up the appointment of Deputy Director of Medical Services at Army Headquarters, which will become vacant on December 26th. Colonel MacArthur will be succeeded as consulting physician to the Army and professor of tropical medicine at the Royal Army Medical College by Lieut.-Colonel J. Heatly-Spencer, O.B.E., M.D., R.A.M.C.

LEISHMAN PRIZE

Major F. McKibbin, R.A.M.C., has been awarded the Leishman Prize for the year 1933, consisting of a silver medal and a sum of £30, for his work in the interests of military hygiene. This prize is awarded annually for the best piece of work in any branch of medicine, surgery, or allied sciences, or in connexion with the general duties of the Royal Army Medical Corps, by an officer of the R.A.M.C. or Army Dental Corps, or by an officer removed from either of these corps but still on the active list.

NORTH PERSIAN FORCES MEMORIAL MEDAL

Surgeon Lieutenant-Commander S. G. Rainsford, Royal Navy, has been awarded the North Persian Forces Memorial Medal for the year 1933 for his paper on "Laboratory Methods of Diagnosis of Brucella Infections" published in the *Journal of the Royal Naval Medical Service*, January, 1933. This is awarded annually for the best paper on tropical medicine or hygiene published in any journal during the preceding twelve months by a medical officer, of under twelve years' service, of the Royal Navy, Royal Army Medical Corps, Royal Air Force, Indian Medical Service, or of the Colonial Medical Service, provided the Memorial Committee considers that any of the papers published has attained a standard of merit justifying an award.

DEATHS IN THE SERVICES

Colonel Robert Blood, late R.A.M.C., of Kingstown, County Dublin, died on April 2nd, aged 87. He was born on March 10th, 1847, was educated at Queen's College, Galway, and in the school of the Royal Irish College of Surgeons, Dublin, and graduated M.D. and M.Ch. in the long-defunct Queen's University of Ireland in 1871. Entering the Army as assistant surgeon on September 30th, 1871, he became colonel on August 10th, 1901, and retired on August 13th, 1904. In the old regimental days he served in the King's Regiment, the 8th Foot, now the King's Liverpool Regiment.

Surgeon Captain John Joseph Hogan Rooney, R.N. (ret.), died after a long illness in the Royal Naval Hospital, Chatham, on May 24th. He was educated at the Cecilia Street Hospital, Dublin, and in the school of the Royal College of Surgeons, Edinburgh, and took the Scottish triple qualification in 1901, after which he entered the Navy as surgeon. He attained the rank of surgeon commander on January 1st, 1917, and retired with an honorary step of rank as surgeon captain on August 18th, 1925. He served in the war of 1914–18, receiving the medals. He leaves a widow.

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons spent two days this week in committee on the Finance Bill. Post Office Estimates, import duties on iron and steel, and the second reading of the Milk Bill were down for other days. On June 5th Mr. Chamberlain announced that no instalment would be paid to the United States in respect of War Debt, pending discussion. Statements on nutrition were made at meetings of private members' groups in the Commons.

On May 30th the House of Lords agreed to amendments made by the House of Commons to the Birmingham United Hospitals Bill.

The Statutory Salaries (Restoration) Bill was read a first time by the Commons on May 30th.

The Licensing (Permitted Hours) Bill, "to make provision with regard to the power to make, and the validity of, directions as respects a part of the year only, and to the power to fix, and the validity of decisions fixing, the permitted hours on weekdays where such decisions are so made," was introduced in the Commons by Sir John Gilmour on May 30th, and read a second time on June 1st.

The Protection of Animals (Cruelty to Dogs) Scotland Bill passed through Committee in the House of Commons on June 4th without amendment, and was read a third time. It was read a first time by the House of Lords on June 5th.

In the House of Lords on June 5th the Unemployment Bill was discussed on the motion for the second reading. Lord Marley, in criticizing the Bill, cited medical evidence as to malnutrition among children of the unemployed. The debate was adjourned.

Health of School Children

Debate on Education Estimates

In committee of the House of Commons, on May 30th, Mr. RAMSBOTHAM introduced the Board of Education Estimates for 1934. The total was £42,104,018. He estimated that during the year the Exchequer and the rates between them would find about £82,000,000 for education. Reports received did not confirm the impression that the physical condition of the children was deteriorating in consequence of prolonged economic distress. The school medical officer for the North Riding of Yorks reported that out of 13,000 children medically examined only seven were really bad cases. The percentage of children pronounced subnormally nourished declined from 6.54 per 1,000 in 1930 to 3.97 in 1933. The school medical officer for Thornaby and Eston said that about 50 per cent. of the men there were unemployed, but an amazingly high standard of nutrition was maintained. The few that were underfed did not suffer from lack of quantity but of quality of food, and this not because of poverty. Mr. Ramsbotham added that certain cases of malnutrition arose not on account of poverty but of organic defects and delicacy. A recent investigation found that it was comparatively rare for the brothers and sisters of a malnourished child to show any signs of malnutrition. In the country as a whole the number of malnourished school children per 1,000 was 11.2 in 1931, 10.7 in 1932, and 11.1 in 1933. This year 190 out of 316 authorities had exercised powers under the school-feeding sections of the Education Act, and ten more were expected shortly to do so. The authorities covered about 70 per cent. of the school population of England and Wales. Over 90 per cent. of the children in industrial areas were covered by authorities which exercised these powers. In seaside towns, small country towns, and rural areas the problem of malnutrition was small or negligible. The Board of Education paid a grant at the rate of 50 per cent. on the provision of meals. In 1928 the net expenditure of the authorities in this service was £227,000; last year it was £560,000. In February, 1934, the authorities fed 292,000 children, either with ordinary meals or with milk, 212,000 of these being fed free of charge. Although only 1 per cent. of the public elementary school children were reported to be suffering from malnutrition, free meals and milk were provided for over 4 per cent. In addition, about 900,000 children received one-third of a pint of milk daily for a penny under voluntary schemes organized by the National Milk Publicity Council. To say that all poor children, irrespective of physical condition, should be fed at the expense of educational funds was a suggestion he could not accept. Provision of meals should be based upon a selection by school medical officers, supplemented by reports from their teachers, the children included being those who showed any signs of subnormal nutrition. Experience in the most distressed areas showed it possible to keep malnutrition in check by providing dinners, or even milk only, under a system of medical selection, not including those children who, though poor, were able to take advantage of the education offered them. No embargo had been or would be placed on the school medical service. Last year the Board approved seventeen proposals for new clinics and 124 forms of inspection and treatment, and this year the Estimates allowed for an increase in the cost of the school medical service. The Board intended to press on the reorganization of the schools on the lines of the Hadow report. Every type of child, whether clever or backward, benefited in the senior schools set up under that report.

Malnutrition in Distressed Areas

Mr. COVE moved a reduction in the Estimates. He contended that an embargo was maintained against the provision and improvement of school buildings. A spokesman of the Association of Education Committees had asserted that, in general, new proposals for the amelioration of the conditions of very young, ailing, and defective children, and for the extended provision of playing fields, were rejected by the Board. Approval was not generally given to the provision of nursery schools, open-air schools, or schools for defective children. Mr. Cove inquired whether the circular issued in September, 1931, restricting developments in the education service, had been scrapped. A feeling was growing up that the reports upon the nutrition of school children were not as objective as they might be. Everyone connected with the distressed areas knew children were ill fed and ill nourished. Doctors themselves did not know what malnutrition was technically, and did not accept any universal test. An investigation had lately been made into the physical condition of children under 5 in Newcastle. Nearly half the children in the poorer class were found to be below the standard height, compared with 5 per cent. of the better-class children. In weight more than half the children of the poorer class were below the standard, as against 13 per cent. of the better-class children. Only 2 per cent. of the poorer children were above the standard, compared with 25 per cent. of the better-class children. Only 20 per cent. of the poorer children passed an anaemia test satisfactorily, and 23 per cent. were found to be definitely anaemic. Of 125 poorer children forty-nine had suffered from acute or chronic chest trouble, compared with only five of the 124 better-class children. This investigation established the need for improved attention to the physical well-being of children from the ages of 1 to 5. Sir PERCY HARRIS pointed out that the House was debating the Education Estimates without the annual report from the Board or that from the Chief Medical Officer. The latter was always one of the most remarkable documents published by the Stationery Office. When the history of public health in this country was written, Sir George Newman would be shown to have contributed more to it than any other medical man or public officer. Was the Board meeting the criticisms of its own medical officer and adviser? In the light of his advice, would Mr. Ramsbotham make a statement on nursery schools, and give a lead to the country?

Vocational Tests

Dr. G. MORRISON, speaking as an old head master, said British methods of vocational testing had been rough-and-ready. He had seen in an elementary school in Rome a complete psychological laboratory to serve that school and

three or four others. In charge of it were two trained psychologists, one with a medical degree, and it had delicate, expensive, and elaborate machines for testing response to stimuli and so on. Though this was mainly for the benefit of those leaving school, the testing was done throughout the school course, and accurate records were kept. He asked Mr. Ramsbotham to consider the possibility of doing something in that direction, and more scientifically than in the past. Mr. WEST said that Mr. Ramsbotham would find in Kensington, if he investigated in conjunction with the medical officer of health, an abnormal number of cases of malnutrition. In the northern division of the borough he would find a disease rate in children double that in the southern part, and an infantile mortality of 120 per 1,000. Mr. ERNEST EVANS suggested that the Board of Education should consult the Ministry of Health about improving the water supplies to schools in rural areas.

Need for More Nursery Schools

Lady ASTOR said that of children up to 2 years only 50 per cent. got the benefit of infant welfare services. Between the ages of 2 and 5 there was a gap in the treatment of children. Of those entering the schools at 5 between 40 and 50 per cent. showed signs of rickets, while 27 per cent. were physically impaired. In 1932, in every 1,000 children between 5 and 15, 194 required treatment, 174 medical observation, and 613 dental treatment. Nearly 58,000 children were in special schools for the blind, deaf, tuberculous, epileptic, mentally deficient, or crippled. Nursery schools were a necessity, and the "cuts" on them should be restored. The country had 5,000 children in open-air nursery schools, but 174,000 between the ages of 2 and 4 were living in slum conditions. In these nursery schools rickets could be eliminated. The schools also eliminated greed, fear, and disease. Open-air nursery schools for 50,000 children would not cost more than £1,000,000, and would save other expenditure later on.

Replying to the debate Mr. RAMSBOTHAM asked for definite instances of education authorities which complained that schemes for new schools had been rejected. Considerable new building had taken place. Local authorities in Willesden, Birmingham, and elsewhere had used the services of experts from the National Institute of Industrial Psychology for testing children and giving vocational guidance. These methods probably were in their infancy, but it was worth while for local education authorities to look into the possibility of giving more scientific and efficacious vocational guidance than at present. Within the last month or two the Board had authorized two more nursery schools.

The motion for reduction of the Estimates was defeated, and the debate was adjourned, the Labour Opposition intimating that it might seek to discuss education again at some later date.

The Government's Milk Policy

Dr. WALTER ELLIOT, in committee of the whole House of Commons on May 31st, moved a resolution to authorize additional expenditure by any board administering a scheme under the Milk Marketing Act, and also to authorize payments for similar purposes out of moneys provided to the Government of Northern Ireland. The resolution also proposed to authorize the payment out of moneys provided by Parliament of sums not exceeding in the aggregate £750,000 to be applied by the Minister of Agriculture and Fisheries and the Secretary of State for Scotland, respectively, during a period of four consecutive years, with the object of securing, so far as practicable, that the milk supplied for human consumption in Great Britain was pure and free from the infection of any disease; and to provide for requiring boards administering milk marketing schemes to make payments after the end of that period to registered producers in respect of milk produced by them in such circumstances as might be prescribed by the Minister with that object. Money was also asked for contributing up to £1,000,000 in two years on a £ for £ basis towards the expenses incurred by Milk Marketing Boards in giving effect to approved arrangements for increasing the demand for milk, and to provide for regulating the manner in which milk is described for purposes of advertisement and sale.

Dr. Elliot said the annual value of the milk products with which the Ministry of Agriculture had to deal was £63,000,000. There were about 3,400,000 dairy cows in the country, and 320,000 persons engaged in the industry. Over 80 per cent. of the world's export of butter and over 50 per cent. of the world's export of cheese were sold in the United Kingdom. The Government sought a bigger consumption of milk, and, to secure that, a clean-up of the herds. Critics contended that it was a mistake to assist the manufacturing side of the industry, and that the money voted by Parliament should be devoted to increasing the consumption of liquid milk in schools. Some 10,000,000 gallons of milk a year were consumed in the schools by 1,000,000 children. That might perhaps be doubled in the first year, but milk used for manufacture in 1933 was estimated at 160,000,000 gallons. Even milk made into cheese on farms might amount to 45,000,000. Parliament must tackle this 200,000,000 gallons as well as the problem of greater consumption of liquid milk. It could not start a campaign for large consumption of milk except upon public confidence in the quality.

Eradication of Bovine Tuberculosis: Proposed Expenditure

This question had been exhaustively reviewed by the Committee of the Economic Advisory Council under the chairmanship of Sir F. G. Hopkins, whose report had been published.* Whatever might be the merits of pasteurization, a universal compulsory scheme was at present impracticable. The Hopkins Committee reported that the total eradication of bovine tuberculosis from all herds was the only complete solution of the problem of tuberculous milk. That solution could not be obtained for many years, and not without much expenditure, but the Government proposed to use £750,000 to make a start on this problem. It was impossible at present for the Milk Board to bear the cost of the scheme for establishing tubercle-free herds as well as the scheme for the Roll of Accredited Producers, which, following the recommendations of the Grigg report, was to be undertaken in England and Wales by the Milk Marketing Board without Government aid. To ensure continuity the Bill would enable Ministers to require the boards to continue this campaign. Boards would be required to submit, for the approval of the Government, schemes for increasing the demand for milk, and a scheme would not be approved for grant on the £ for £ basis unless it contained provision for the supply of milk to schools at reduced rates. He had no need to argue the case for increasing the general consumption of milk. Even in winter this country had a 20 per cent. excess of milk over liquid requirements, and in summer the excess might rise to 40 per cent. Under the resolution before the House advances would be paid on milk sold under the marketing scheme for manufacture into cream, butter, cheese, milk powder, or condensed milk. He assumed that in the first year 160,000,000 to 180,000,000 gallons would qualify for advances under the resolution. The Government of Northern Ireland would shortly propose to carry through a similar series of reforms, in some ways more drastic, grading the milk, cleaning up the herds, and providing a supply of milk to children in schools.

Mr. TOM WILLIAMS said the report of the Hopkins Committee indicted the dairy farmers, the large local authorities, and all past Governments. It showed that 40 per cent. of the cows reacted to the tuberculin test, and that there was no sign of any diminution in the number. Of samples of milk taken in four large Scottish cities 10 per cent. were infected with tubercle bacilli. Of the local authority samples taken in England and Wales 7 per cent. were so infected. They could not hope to increase consumption of milk till they could guarantee a much purer supply. The Hopkins report showed that some county authorities were indifferent to securing a purer supply. Responsible people said between £30,000,000 and £50,000,000 would be required to clean up all the herds in the country. Dr. Elliot proposed to spend £170,000 yearly. What would he do with it? Would he provide Grade A (T.T.) milk, or provide a national veterinary inspectorate to inspect all the animals from time to time? There ought to be a national organized service of trained and qualified inspectors, and no county boundaries should

* See leading article, p. 1035.

interfere with their work. State funds should supply free milk to every elementary school child in the country. An investigation in Cardiff had shown that in a good middle-class house 3.8 pints of liquid milk were consumed per person weekly, in a good working-class area 1.87 pints, in a house under the new housing scheme 1.32 pints, and in a poor working-class house 1.1 pints. In the good working-class area 9 per cent. of the houses took no liquid milk; in the housing scheme houses 15 per cent., and in the poorer working-class houses 26 per cent. The sale of skimmed milk rose from 1.94 pints weekly per person in a good working-class house to 3.24 pints per person in a poor working-class house, though this last was not in a slum area. Moreover, the consumption of fresh liquid milk in a poor working-class house where there were children was only 1.1 pint per head, compared with 2.8 pints in a similar house without children. Of the children from houses which took no fresh liquid milk, only a few received milk at school. Low wages and unemployment had led to a decrease in milk consumption in certain areas. He need not quote from the British Medical Association's report on nutrition. Last year 900,000 children attending elementary schools in England and Wales received on an average one-third of a pint of milk per day, but paid 2s. a gallon for it, whereas the subsidized price at the factories was 5d. per gallon.

Mr. JAMES DE ROTHSCHILD said that medical opinion was not agreed on pasteurization, and that was one of the first things which should be examined during the campaign to increase the purity of milk. Pasteurization must never be regarded as a substitute for pure unprocessed milk, and the present conflict in medical opinion was worrying the milk-consuming public. Pasteurization allowed large distributors to foster low-grade production. The large distributors had followed this policy for years, and desired to continue it. Experiments to decide the relative values of raw and pasteurized milk could be conducted in schools over a long period. Such an experiment in the Lanarkshire schools had proved inconclusive. One on a large scale would give the public confidence when drinking milk. The campaign for purity could only succeed if the producers were rewarded with higher prices for better quality, but the distributors' margin for high quality milk could be drastically reduced because no processes were necessary. The present marketing scheme encouraged the production of low-grade milk. Mr. OSWALD LEWIS said it was undesirable to increase consumption of raw milk regardless of the possibility of spreading disease. At a later stage the Government would assure the House that it had in mind some definite qualifications with regard to the raw milk to be supplied in schools.

Immunization of Herds by Inoculation

Sir FRANCIS ACLAND said he did not understand how bovine tuberculosis could be eradicated so long as the sale was permitted, as the Hopkins report proposed it should be, of milk uncertified—that was, of milk cleaner than it had to be now, but not derived from tubercle-free herds. He believed there was more chance of immunizing herds by inoculation than would appear from the Hopkins report. Research on immunization by inoculation should now be taken up with the greatest activity, and the supply of milk to schools should be delayed till they had a certainty of a tubercle-free supply. He backed the "children's minimum" policy, which asked for free provision of milk to all elementary school children, necessitous children under 5, and expectant and nursing mothers; but if they rushed into the proposal of distributing milk to schools some medical officer would say a child had acquired tuberculosis from milk, and that would be a fearful handicap. Many medical officers of health overdid their pursuit of pasteurization. Very little pasteurization was really fool-proof, and no one had laid down the exact conditions for it. Captain HEILGERS, as a Grade A producer, said that doctors had done much to kill production of clean milk in the United Kingdom, and, by crabbing the milk supply day in and day out, made it difficult for the Milk Marketing Board to raise the sales of liquid milk. Certified milk cost nearly 3d. a gallon extra to produce. The farmer must have a reward for producing cleaner milk. It would be a great thing to clear tuberculosis from this country, but the doctors had not given the milk producers a fair deal in representing the odds arising from tuberculosis. These were 2,200 to 1 in any year against any child getting tuberculosis. He supported the supply of fresh milk to children, citing experiments by Dr. Corry Mann at the Foundling Hospital as conclusive proof of the value of milk. He believed the Milk Marketing Board intended to extend the supply of cheap milk to factories, mines, and workshops. Admiral TAYLOR said the import of skimmed condensed milk should be prohibited. Although labelled "Unfit for babies," there was no guarantee that it would not be given them. What would Dr. Elliot do if factories in this country began to manufacture it?

The Medical View

Sir FRANCIS FREMANTLE said he spoke as a consultant medical officer of health, an active dairy farmer, and as president of the Central Council of Milk Recording Societies. As a medical officer of health he was always asked not to exaggerate, or perhaps not to emphasize, the danger of disease arising from milk. No one would wish to exaggerate the fears of the public, but agriculturists who tried to belittle the amount of disease did the worst disservice to the dairy industry. The People's League of Health had established a veterinary council and a medical science council, which established a combined commission to study the milk supply. They reported last year, and in April sent a deputation to the Minister of Health and to the Minister of Agriculture. Their careful conclusions were emphasized by the report of the Economic Committee of the Privy Council. They said that among the diseases conveyed from the cow to man were tuberculosis, undulant fever, and septic sore throat. The finding that at least 40 per cent. of the cows in this country were infected with tubercle had not been sufficiently met by those who talked for the dairy industry. That the nutritive value of milk was great the experiments of Dr. Mann with children in a Poor Law institution showed, but the nutritive value of milk must be considered in conjunction with its infectivity. It was absurd to say that the medical profession should not pay attention to the comparatively small proportion of tuberculous milk. It had to look at the sufferings of crippled children, to say nothing of the 2,000 deaths and 4,000 fresh cases every year. Pasteurization was perfectly simple, and did not destroy the nutritive qualities of the milk or its flavour. The difficulty of the machinery was solving itself, though on farms and out-of-the-way places there was danger in the use of this machinery. If milk was provided for schools it would be under the authority of the school medical officer or of the medical officer of health. They would consider the best way of protecting the milk given, and the greater number would say it was possible to pasteurize milk cheaply. In any case, the nutritive value of the milk would be to the advantage of the children, and these officers would desire to give to the children as large a supply as could be allotted. The short-term policy was the pasteurization or boiling of milk; the long-term policy the eradication of tubercle from the herds. The latter was most difficult, but could be done by a proper long-term policy, as set out in the reports he had mentioned. Greater support was needed for the veterinary profession in supervising cattle. The country required a system of tuberculin testing and of isolating tuberculous cattle from those which were not. The veterinary profession had not advanced with the times, and still suffered from want of proper training. The increase of educational facilities and the bringing up of a new generation of veterinary officers should receive consideration. They could not have proper veterinary inspection without adequate machinery of college and staff, and without bringing the best men into the profession. They must recognize the value of scientific work for prevention as well as disease in dairy cattle, and pay for the services of veterinary surgeons, who would do work on cattle such as medical officers of health had been organized for fifty years as a profession to do for human beings. Despite all difficulties, it would be an enormous gain if the proportion of food given to children every day in the form of milk could be increased, but there was danger in sudden change. In some homes the children might be deprived of other food because they were getting milk at school.

Mr. SKELTON, replying for the Government, said Sir Francis Acland need not fear there would be an inadequate supply of safe milk for the children of this country. There was a considerable and growing number of certified herds, and in London the great bulk of the milk, if not the whole, was

pasteurized. If the country could clean up the herds it would secure a degree of safety it could never attain by pasteurization, which had anxieties and dangers.

The House agreed with Dr. Elliot's resolution by 177 to 43. On June 1st the resolution was reported and the Milk Bill was brought in by Dr. Elliot. The Government proposed that the second reading debate should be on June 7th.

Lotteries Bill and Competitions in Aid of Hospitals

The House of Lords went into committee on the Betting and Lotteries Bill on May 30th, and continued discussion of that stage on May 31st. In Clause 24 (Restrictions on Certain Prize Competitions) Lord LUKE moved to insert a new subsection to ensure that a corporate body established before the passing of the Bill for a charitable purpose might conduct for any such purpose any competition in which success depended partly upon the exercise of skill, provided that the body had submitted to the chief officer of police in its area a copy of the rules and conditions of the competition, and an opinion of counsel that success in the competition depended to a substantial degree on the exercise of skill, and provided that the chief officer of police had not, within fourteen days of that submission, intimated his disagreement.

Lord Luke said his friends were anxious to preserve for hospitals this competition source of revenue, which seemed to be threatened by the clause. It was undesirable that voluntary workers, endeavouring to raise funds for a charity, should be open to prosecution and penalties when acting under the best legal advice, and that the charity for which they acted should lose thousands of pounds—spent in printing and advertising. The British Charities Association had run competitions for ten years. Last year it distributed £21,000 to hospitals, which brought its total distribution to 900 hospitals up to £250,000. The competitions had been part skill and part chance, and not one had been challenged in the courts. It was impossible to run a competition depending entirely on skill if prizes were to be distributed. Prize competitions for charity were popular and harmless, and charities could not afford at present to be deprived of this source of income. A hospital running a competition after this Bill passed, if unamended, would run the risk of an action to show whether the skill element was substantial. Lord LONDONDERRY, the Minister in charge of the Bill, said he could sympathize with Lord Luke's desire that the British Charities Association should be allowed to conduct competitions without danger of criminal proceedings, but the solution he proposed could not be entertained. Whether any competition was legal could be determined only by the courts. The legality would depend, to a certain extent, on the way the competition was conducted. Lord LUKE said he would leave the amendment and a consequential one over to the report stage.

Clause 24 was agreed to. The DUKE OF ATHOLL moved at the end to insert a new clause giving exemption for State and licensed lotteries. He said that recently he had allocated, from what had been described as a lottery, large sums of money to 118 hospitals and other institutions. All, including great London hospitals, had written grateful letters, and most expressed the hope that he would be able to inaugurate another scheme on similar lines for their benefit. He read a letter of thanks from the Treasurer's House of St. Thomas's Hospital. He saw no reason why lottery subscriptions should clash with voluntary subscriptions. His clause would enable the Government to authorize definite bodies such as hospitals to promote a lottery, or to appoint commissioners to carry out a lottery, or else authorize others to do it. The DUKE OF SUTHERLAND supported the amendment. The BISHOP OF WINCHESTER and Lord SOMERLEYTON opposed it. The Bishop said the majority of the hospitals were not asking for these lotteries. Lord Somerleyton said that voluntary hospitals in London were in a better position than for some time. Fewer had deficits.

Lord LONDONDERRY hoped the House would not accept the amendment. He was chairman of two hospitals in London, and opposed any organized system of lotteries for the purpose of supplementing hospital finance. If any system of lotteries were established the fountain of charity would dry up, as they heard it had in Ireland, where charitable contributions formerly forthcoming were now non-existent. The Government agreed with the Royal Commission that large-scale lotteries, promoted by a statutory board for charitable objects or by individual charities under permits, were undesirable.

The House negatived the clause proposed by the Duke of Atholl, and completed the committee stage.

Experiments on Animals

Replying to Sir Robert Gower, on May 30th, Sir JOHN GILMOUR stated that the number of instances during 1933 where inspectors witnessed the whole, or the initial procedure, of an experiment on a living animal was seventy. Twelve of these were under licence alone, three under Certificate B, and fifty-five under Certificate A. In addition, the inspectors in the course of their visits saw and examined many thousands of animals under experiment. The seventy experiments in question and the animals under experiment were seen in various registered places, a complete list of which would be given in the Annual Return. Information was not yet available as to how many experiments on animals were reported as performed during 1933.

Duty on Insulin Removed

On May 31st Sir Francis Fremantle, Dr. Howitt, and Captain Elliston, as a deputation from the Parliamentary Medical Committee, interviewed Mr. Neville Chamberlain about the removal of the duty on imported insulin. Mr. Chamberlain was accompanied by Mr. Geoffrey Shakespeare and Dr. Burgin. The deputation pointed out that the medical Members of Parliament were in a difficult position. Originally opposed to the tariff on insulin, they had gone into the matter thoroughly, and had finally agreed that the duty was necessary to enable British producers to compete with the Danes, who had buildings and equipment free and their product exempted from income tax. In Denmark raw pancreas and labour were both cheaper. Since the investigation no objection had been taken to the duty in the medical press, nor, so far as the deputation knew, from medical quarters. Nor was any objection on the score of prices taken by the Ministry of Health, the British Medical Association, or the medical profession generally. Under protection the price of British insulin had fallen. On the other hand, it was evident that the Danish producers were prepared to undersell the British manufacturers, however much these reduced the price, and would so secure the British market and the foreign trade which was now beginning. That involved a great danger of stopping research as well as production. The deputation, in fact, could see no reason for the change of Government policy. Mr. CHAMBERLAIN, in reply, showed that the imposition of the duty last February was not a Government decision, but the decision of the panel of experts that insulin was a fine chemical. He suggested that it was open for the British manufacturers to apply again to the Import Duties Advisory Board for any duty which was needed to protect their industry. He would not give any reason for the recent Government decision, except the general one that the cheaper insulin was, the better for the patients.

Debate in the Commons

On June 4th the House of Commons began consideration of the Finance Bill in Committee. Mr. H. WILLIAMS moved the deletion of Clause 5, which repealed the customs duty on insulin. He said that it was a little inappropriate, on the day that the announcement was made that Dr. Banting had been honoured, that the committee should be asked to pass a clause which would probably have the effect of handing over to a foreign monopoly the manufacture of insulin, which was discovered by this young and distinguished Canadian medical man. The increase in the duty on insulin from 10 to 33⅓ per cent. had not been followed by any rise in the price, and there was no evidence that any sufferer from diabetes in this country had been prejudiced. Dr. HOWITT said that to-day this country produced finer and purer insulin than any other country in the world. Our rivals were the Danes. People who said that insulin would become cheaper if the protection

was removed were wrong, for while the protection had existed insulin had steadily become cheaper and cheaper. Denmark was able to produce insulin more cheaply than we were, partly because of the subsidized nature of the manufacture, partly because of the ease with which the Danes could obtain the pancreas, and partly because of the cheapness of the pancreas. In the hospital with which he was connected only British insulin was used. That was not from patriotic reasons, but because the doctors said that it was the best. There was the danger that it might pay Denmark to sell her insulin here at a loss for a period if she could succeed in closing down our chemical works.

Mr. CHAMBERLAIN said that the imposition of the duty of 33⅓ per cent. on imported insulin under the Safeguarding of Industries Act was a kind of accident. Insulin was not picked out by the Government as being an article of such importance to the country in wartime that it must be safeguarded. The omission of insulin from the list of fine chemicals was challenged by the Association of British Chemical Manufacturers. The Board of Trade took up the challenge, and opposed the inclusion of insulin. The matter went before the tribunal, which decided that insulin must be included in the list. The purpose of the association was to establish the principle that certain biological products should be defined as fine chemicals; having established that principle by the decision of the tribunal it was not particularly interested in insulin. The clause in the Bill was not introduced because of any improper behaviour on the part of the chemical manufacturers in this country. It was very much to the credit of the British manufacturers that they had not only continually reduced the price of insulin, but had produced insulin of a quality which had established a special reputation here and abroad. Representations had been made to him to the effect that diabetics felt that the price of insulin was higher than it would have been but for this duty. There were a considerable number of people to whom insulin was a matter of life or death. If these people thought, even mistakenly, that they had to pay more for it than was necessary by reason of the duty they would have a just cause of complaint. Since the announcement that the duty was to be repealed there had been a further reduction in price. The repeal of the duty left the British manufacturer free to make application to the Import Duties Advisory Committee for a duty on imported insulin. There would be an inquiry into the facts of the case, and if the committee came to the conclusion that diabetics would suffer they would, he imagined, make a recommendation accordingly.

The clause was ordered to stand part of the Bill.

Water in Swimming Baths.—Mr. SHAKESPEARE told Mr. D. G. Somerville, on May 31st, that a report on the purification of water in swimming baths was prepared by the Ministry of Health in 1929. This report emphasized the importance of clean water in public baths, and explained the best method of purification. Local authorities were aware of the recommendations in the report, to which attention would again be called in the forthcoming annual report of the Ministry. In the case of swimming pools not belonging to local authorities, the water, if impure, would constitute a nuisance under the Public Health Act, and local authorities would have power to deal with it.

Specialists on Royal Commissions.—In reply to Mr. Chorlton, on May 31st, Mr. BALDWIN said he had noted the views expressed by the Parliamentary Science Committee in a letter dated May 8th, which urged the inclusion of scientists and technicians in the personnel of all Royal Commissions, Departmental Committees, and other committees dealing with scientific and technical matters. He said it would be inadvisable to lay down a general rule. The importance of including scientists and technicians in appropriate cases was, and would be, borne in mind.

Vaccination in the Navy.—On June 4th Sir B. EYRES-MONSELL informed Mr. Groves that it was not the practice to allow persons to enter the Navy who were conscientious objectors to vaccination. All candidates on entry were required to declare their willingness to be vaccinated, or revaccinated and inoculated if necessary. Otherwise they were not accepted for entry.

Medical News

The Queen has consented to open the new Students' Hostel at the London Hospital Medical College on Tuesday, July 3rd, at 3.30 p.m.

The Earl of Derby will distribute the prizes at St. Thomas's Hospital Medical School in the Governors' Hall, on Tuesday, June 26th, at 3 p.m. There will be tea and music on the terrace.

The annual general meeting of the British Science Guild will be held on Tuesday, June 12th, at 4 p.m., at the Royal Society of Arts, John Street, Adelphi, with the president, Lord Melchett, in the chair. The meeting will be followed by a popular lecture (illustrated by lantern slides and experiments) on "Friction," by Professor E. N. da C. Andrade, D.Sc. Tickets for the meeting and lecture may be obtained, free of charge, from the secretary of the guild, 6, John Street, Adelphi, W.C.2.

An exhibition, organized by the Rubber Growers' Association, will be held at the Hotel Metropole, Northumberland Avenue, W.C., on June 13th, 14th, 15th, and 16th, from noon to 8 p.m. Admission free.

The Fellowship of Medicine (1, Wimpole Street, W.) announces a lecture-demonstration on "Oedema and Diuretics" at 11, Chandos Street, W., on June 12th, and another, on "Renal Insufficiency," for June 19th. There will be a course in proctology at St. Mark's Hospital from June 11th to 16th, and a course in medicine, surgery, and the specialties at the Prince of Wales's Hospital from June 11th to 23rd; the latter will be repeated from June 25th to July 7th. Forthcoming courses include cardiology at the National Heart Hospital, June 25th to July 7th; diseases of children at the Children's Clinic, June 25th to July 7th; ophthalmology at the Central London Ophthalmic Hospital, July 2nd to 7th; and a week-end course in medicine and surgery at the Metropolitan Hospital, June 30th and July 1st.

The Faculty of Medicine of the University of Paris has arranged a post-graduate course in cancer for the month June 11th to July 12th. In addition to formal lectures, discussions, and clinics in the mornings, there will be demonstrations of surgical, *x*-ray, and radium treatment. The fee is 300 francs, and a certificate will be awarded at the end of the course. Inquiries should be directed to the Faculty of Medicine, Salle Béclard, Paris.

The next conference of the British Health Resorts Association will be held at Cromer, at the invitation of the urban district council, supported by the local medical practitioners and the Norfolk Branch of the British Medical Association, from Friday, June 29th, to Sunday, July 1st. There will be discussions on "The Seaside Resort in the Treatment of Respiratory Diseases," to be opened by Dr. R. A. Young, followed by Dr. L. S. T. Burrell, and "Climatic and Allied Factors in the Incidence of Disease and its Treatment on the East Anglian Coast," to be opened by Dr. R. Fortescue Fox.

A congress on *B. coli* infections and intestinal intoxications will be held at Châtel-Guyon on September 23rd and 24th, and will comprise medical, surgical, therapeutic, and hydrological sections. Among the topics to be considered are septicaemia of *B. coli* aetiology, also the diseases of children caused by this organism, and its localization in the genital organs. Other subjects for discussion include hydromineral therapy in intestinal infections and intoxications, nervous complications in these conditions, and the gynaecological aspects of *B. coli* infection. The fee for membership of the congress is 50 francs. Specially reduced railway fares and hotel charges are available for those who attend. Further information is obtainable from the administrative secretary of the congress, M. Juin, or Dr. P. Balme, Les Grandes Thermes, Châtel-Guyon.

The third French Congress of Gynaecology will be held in Paris from July 7th to 10th, with Professor Koenig of Geneva as president of honour, and Dr. André Binet of Nancy as president.

The King has approved the grant of the Polar Medal in bronze, with clasp inscribed "Antarctic 1929–31," to Dr. William W. Ingram, M.C., who was a member of the British, Australian, and New Zealand Antarctic Research Expedition, 1929–31.

Owing to the present financial crisis the Austrian Minister of Education has decided to reduce the number of university institutes. One of the two oto-rhino-laryngological clinics has already been closed, as well as one of the three gynaecological clinics.

A lecture on the theory and practice of contraception will be given to medical students and practitioners by Dr. Gladys Cox on Tuesday, June 12th, at 6 p.m., at the Walworth Women's Welfare Centre, 153A, East Street, S.E.17. Tickets must be applied for in advance.

The second centenary of the birth of the Spanish surgeon Antonio de Gimbernat is being celebrated this month by the Surgical Society of Catalonia, when a prize of 1,500 pesetas will be awarded for the best biography of Gimbernat.

The summary of deaths among medical practitioners during 1933, published in the *Journal of the American Medical Association*, shows that the four commonest causes of death were heart disease (1,131), cerebral haemorrhage (360), pneumonia (313), and cancer (286).

The prize of 5,000 Belgian francs offered by *Bruxelles-Médical* for the best work published in its columns during 1933 has been divided between Professor Bessemans, rector of Ghent University, and Dr. Dumont, a colonial medical officer.

Dr. Jean Charcot, the well-known explorer and member of the Académie de Médecine, has been nominated Grand Officer of the Legion of Honour.

Professor W. His has been awarded the Goethe Medal and nominated honorary doctor of philosophy in the University of Berlin.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

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QUERIES AND ANSWERS

Orchitis After Prostatectomy

"X. Y. Z." writes: A man aged 72 had a suprapubic prostatectomy done a year ago for hypertrophy. Prior to his operation he had frequent acute attacks of epididymo-orchitis. These attacks still persist. Can any reader suggest what form of treatment one might adopt? The patient is strong and active; no history of gonorrhoea, or anything to suggest malignancy.

Worms in White Fish

"RURAL G.P." writes from Ireland: I have on several occasions found small "wire-worms" in the flesh of white fish such as codling. Are such worms found in all fish or in some only; are they completely killed by ordinary cooking; and, if swallowed alive, would they become parasitical in man?

Movement of Needles in the Tissues

Dr. C. BELCHER (Birmingham) writes in reply to "Sceptic" (May 12th, p. 880), who asks whether foreign bodies move in the tissues: The following cases will prove that such is a fact. Foreign bodies do travel from the original entry. A youth consulted me for a pain in his right side, not severe, but worse at one time than another. On his first visit I found little to account for his trouble. On his second visit I went over him more carefully, and passing my hand over his side felt a prick. I examined the part again, and still experienced the sharp prick like that of a pin; and, looking at the spot, which was in the posterior axillary line at a level with the first lumbar vertebra, I saw a small discoloured spot, the point of a pin or needle; but he could give me no information as to how it got there. The following evening he returned, with his mother. I explained to her what I had discovered and asked permission to remove it, which I did; it was a darning needle about two inches long, blackened, but quite serviceable. Immediately the woman saw it she recognized it, and exclaimed "I remember it very well; when he was a baby, not having a safety-pin handy, I fastened his shawl in front with the needle, put him in the cradle in a hurry as I was called away, and forgot it until I came to undress him and then thought about the needle. Look as I would I could not find it." The other case was a man with a small beershop, who came to me complaining of numbness and tingling of the fingers of his left hand. I could see nothing in the hand to account for it, and so examined his arm and upper arm; when I put my hand in his left axilla I felt a slight ridge, and when I pressed upon it he said that this started the tingling in his fingers. I recognized that whatever it was this was the cause of his trouble, and intimated that he had got some substance into his axilla and asked him how it had got there. He refused to admit anything being there: never, to his knowledge, had he had anything go into his side. I suggested he might let me put a needle under the skin (as the foreign body was only skin deep), which he did, and I distinctly felt a hard substance beneath. Without any anaesthetic, local or otherwise, I made a small incision, and with the forceps withdrew a triangular splinter of glass one and a half inches long. I showed it to him, and he was dumbfounded. On coming back to have it dressed he told me he had talked it over with his wife, when she remembered that on a windy day the previous summer the glass door leading to the shop had blown to and he had put his shoulder to it to prevent slamming, but he had smashed the glass pane. He felt nothing, but she noticed a spot of blood on the top of the shoulder of his white shirt afterwards, and mentioned it to him, but they could see no wound.

Income Tax

Review of Past Years

"JUNIUS" asks how many years is the inspector authorized to go back for investigation of accounts.

*** The Income Tax Acts do not give the inspector much authority in the matter, but they give the Commissioners the right of making assessments for the six previous years. In certain circumstances those assessments may be confirmed wholly or partially in treble duty. Consequently it is advisable to meet any reasonable requests by the inspector as there is in the background the possibility that refusal may lead to action by the Commissioners, which may in effect enforce production of the evidence requested by the inspector.

Motor Car Transactions

"W. A." bought a car in 1927 for £685 and sold it in May, 1933, for £35, the reduced value then being £231. He bought a new car for £405 in replacement, but sold it in October for £295, and may not buy another. He has been allowed depreciation at 15 per cent. per annum.

*** He is entitled to obsolescence allowance in respect of the replacement in May, 1933, the amount being £231 − £35 = £196. That sum can be treated as a professional expense of the year 1933. No obsolescence allowance is due in respect of the subsequent transaction unless and until another car is purchased in replacement of the one sold in October, 1933.

Purchase of Drugs

"F. L." purchased a share in a practice in October, 1932, and paid £52 to his predecessor for a share in the drugs. Can he claim that that payment is an allowable expense.

*** "F. L.'s" liability is determined by his share of the profits of the practice, and, presumably, the cost of the drugs used is charged in arriving at the amount of the firm's profits, and his special payment cannot be deducted again. In effect it is a capital payment so far as "F. L." is concerned, and is part of the cost to him of acquiring his share in the practice.

LETTERS, NOTES, ETC.

Local Anaesthetic for Myringotomy

Dr. ARTHUR MURPHY (Brisbane) writes: In the *Journal* of February 10th (p. 262), Dr. John M. Dewar of Edinburgh asks in a letter for the means of incising the membranum tympani under local anaesthesia. May I assure him that the following local anaesthetic will secure the painlessness of the proceeding within ten minutes, often less. The criterion is that the inflamed membrane goes white in colour, which in my experience it has always done.

Tutocaine, menthol, acid carbol. crystals, āā grains 15.
Alcohol 42 per cent., aq. dest., āā ɱ8.

Powder the menthol and mix the tutocaine with it in a mortar. Then, in a glass, add first the carbolic acid, then the spirit, and then the water. In chemically pure glass bottles it keeps indefinitely. Apply on an applicator directly to the ear drum over the area to be incised.

*** Care should be taken that this preparation is not applied to the skin of the auditory meatus.

Cost of Hypodermic Needles

Dr. T. D. Ross (Cathcart, Glasgow) writes: A patient of mine who uses insulin daily has been complaining about the high cost of hypodermic needles. He has made inquiries and finds that the wholesale prices charged to chemists for these are: *British make* (stainless steel) 17s. 6d. per gross, or about 1½d. each; *German make* (nickel plated) 10s. to 12s. per gross, or ¾d. to 1d. each. The prices being charged by chemists are 6d. for one only or 5d. each if purchasing half a dozen lots or more of British needles, and 3½d. each for German needles. My patient much prefers the British article. If the above wholesale prices are correct it would appear that the retailer is making an exorbitant profit.

Pernicious Anaemia in the Asiatic

"M.D. (Madras)" writes: The naïve assertion by Dr. Eric C. Spaar of Colombo, in your issue of March 31st (p. 578), about the non-occurrence of pernicious anaemia in the Asiatic reminds one of the recent controversy in the correspondence columns of the *Journal* on the incidence of rheumatic infection in the Tropics. I believe that Davidson, in his valuable monograph on pernicious anaemia, does mention the rarity of the disease in India. Most practitioners of standing in India should be able to testify to the contrary. I have myself, in my limited hospital work, come across at least half a dozen cases that will satisfy the most exacting of modern criteria in diagnosis of pernicious anaemia, and have seen undoubted cases of subacute combined degeneration. I deplore the lack of case reports with full details of investigation. I hope that the growing tendency of expression in India will dispel in time many ill-founded textbook notions on diseases in this country.

Martyrdom-by-Sandwiches

Dr. DOUGLAS ANDERSON, a member of the New South Wales Branch of the Association, now in England, writes: In order to protest against what they interpret as the contention of the B.M.A. that a working man can live on 5s. 10½d. a week, and on the other hand the extravagant living at the University, five Oxford undergraduates have formed the Martyrs' Memorial Dining Club. The five members have met nightly to consume ten penn'orth of sandwiches and coffee served from a coffee stall, and they have an anthem designed to be chanted as they assemble, running:

Here where the Martyrs resolute and godly
Escaped through flame to Pit that flames for all,
We pale and studious denizens of Bodley
Receive our sustenance from yonder stall.

Now, however, at the end of term, it is reported that the Martyrs, despite their privations, are looking remarkably fit and well. Might we not add another verse to their anthem?

After a week of martyrdom-by-sandwiches
The five have not appeared to waste away;
Indeed they've thriven as they had not planned, which is
A sign one shouldn't doubt the B.M.A.

The Word "Clinic"

Dr. W. W. SHRUBSHALL, D.P.H. (Burgess Hill, Sussex), writes: In your issue of May 19th I notice with satisfaction the protest against the misuse of the word "clinic," suitably expressed by Dr. L. Firman-Edwards. I well remember when the importation of this word with its modern meaning, probably from America, was first noticeable, and the derision in which it was then held by some of my confreres. The scorn for it in its modern misuse was, unfortunately, not sufficient to inhibit its growth. Your correspondent's suggested use of the word "centre" in place of "clinic" in this connexion appears to be quite appropriate.

Anglo-American Continental Medical Society

Dr. TOM A. WILLIAMS informs us that the officers of the Anglo-American Continental Medical Society commissioned him to arrange a gathering of the society and its friends in the British Medical Association during the Bournemouth meeting. In consultation with those responsible for organizing the meeting, Friday, July 27th, at 12.30 p.m. for luncheon in the Pavilion, has been selected. The society feels that all its members who are eligible should belong to the B.M.A., in order to keep in touch with the profession at home and in their turn to keep it acquainted with the fact that there are still on the Riviera, and throughout Europe and the contiguous countries, practitioners competent to deal with English-speaking people who have the misfortune to be ill while abroad. To that end it wishes not only to get into touch with former friends, but to form new connexions in England by means of this gathering at Bournemouth. Those wishing to attend should communicate with Dr. Tom Williams, before July 23rd, at the Royal Societies Club, St. James's Street, S.W.1.

Abstracts for Filing

The *Archivos Latino Americanos de Cardiologia y Hematologia*, a bi-monthly periodical published in Mexico, adopts an excellent practice in the publication of its epitome of current medical literature. Abstracts from foreign journals are printed on specially stiffened coloured paper which, readily detachable, and bearing a reference number at the top right-hand corner, can be placed straight into a card-index filing cabinet. Use of the reverse side of each sheet allows for an overflow of subject-matter in the case of a long abstract, and enables three abstracts to be printed on a uniform amount of space on each page.

London for the Visitor

London is expected by travel authorities to attract greater numbers of visitors this summer than ever before, from the rest of Britain and from over-seas. In readiness for their arrival the Automobile Association has produced for the first time an *A.A. London Guide*. This booklet is built round a general descriptive article suggesting convenient excursions, chiefly afoot, and street maps of the City and West End are supplemented with a cross-referenced list of principal streets. It may be obtained free by members of the A.A. on application to Fanum House, New Coventry Street, W.1.

Toxins and Emulsions: Correction

We regret that line 11 of the third paragraph in Dr. V. G. Walsh and Dr. A. C. Frazer's letter (June 2nd, p. 1004) was printed incorrectly by the accidental substitution of line 14 of the same paragraph. The two sentences involved in the error should have read: "Thus we can safely eliminate the solubility idea once and for all. Adsorption is the only phenomenon necessary to explain these results."

Vacancies

Notifications of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 64, 65, 66, 67, 68, 69, 72, and 73 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 70 and 71.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 292.